Chapter 12

HEALTH EDUCATION

Safety and Injury Prevention

Substance Abuse

Tobacco

Abstinence-Based Education

Physical Education

Lifelong Healthy Eating

Texas Essential Knowledge and Skills for Health Education

Within Title 19, Part 2, Chapter 115 of the Texas Administrative Code[1] (TAC), specific guidelines are detailed regarding what a child is supposed to learn in health education at each grade level from kindergarten through 12th grade. This section covers specific areas of health education including: safety and injury prevention, substance abuse, tobacco, and abstinence. Physical Education and Lifelong Healthy Eating will also be covered.

Safety and Injury Prevention

Texas Administrative Code, Texas Essential Knowledge and Skills for Health Education lists the required knowledge achievements regarding safety of each student in the various grade levels[2]. The entire Chapter 115 of title 19 of the Texas Administrative Code may be located on the World Wide Web at http://www.tea.state.tx.us/rules/tac/ch115.html

Elementary

All students in all grade levels are encouraged to identify and describe strategies for avoiding drugs, violence, gangs, weapons, sexual relations, date rape, and other harmful situations. These various topics are detailed within the Texas Essential Knowledge and Skills for Health Education (TEKS). Below is a list of some of the specific knowledge goals pertaining to safety and injury prevention a child is to reach within each grade level. These requirements have been taken from the TEKS manual[3].

Health Education, Kindergarten: Health Behaviors.

- Identify the purpose of protective equipment such as a seat belt and a bicycle helmet.
- Identify safe and unsafe places to play such as a back yard and a street.
- Name the harmful effects of tobacco, alcohol, and other drugs.
- Identify ways to avoid harming oneself or another person.
- Practice safety rules during physical activity such as water safety and bike safety.
- Identify how to get help from a parent and/or trusted adult when made to feel uncomfortable or unsafe by another person.

- Demonstrate procedures for responding to emergencies including dialing 911.
- Name objects that may be dangerous such as knives, scissors, and screwdrivers and tell how they can be harmful.

Personal/Interpersonal Skills. Identify and use refusal skills to avoid unsafe behavior situations such as saying no in unsafe situations and then telling an adult if he/she is threatened.

Health Education, Grade 1: Health Behaviors. The student understands that safe, unsafe, and/or harmful behaviors result in positive and negative consequences throughout the life span.

- Identify and use protective equipment to prevent injury.
- Name safe play environments.
- Identify ways to avoid weapons and drugs or harming oneself or another person by staying away from dangerous situations and reporting to an adult.
- Identify safety rules that help to prevent poisoning.
- Identify and describe safe bicycle skills.
- Identify and practice safety rules during play.
- Identify how to get help from a parent and/or trusted adult when made to feel uncomfortable or unsafe by another person.

Health Education, Grade 2: Health Behaviors.

- Identify ways to avoid deliberate and accidental injuries.
- Explain the need to use protective equipment when engaging in certain recreational activities such as skateboarding, rollerblading, cycling, and swimming.
- Explain the importance of avoiding dangerous substances.
- Identify a trusted adult such as a parent, teacher, or law enforcement officer and identify ways to react when approached and made to feel uncomfortable or unsafe by another person.

Health Information:

- Describe behaviors that protect the body structure and organs such as wearing a seat belt and wearing a bicycle helmet.
- Identify hazards in the environment that affect health and safety such as having loaded guns in the home.

Influencing Factors: Recognize unsafe requests made by friends such as playing in the street.

Health Education, Grade 3: Health Behaviors.

- Explain the need for obeying safety rules at home, school, work, and play such as bike safety and avoidance of weapons.
- Identify examples of abuse and describe appropriate responses.
- Describe the importance of taking personal responsibility for reducing hazards, avoiding accidents, and preventing accidental injuries.

Health Education, Grade 4: Health Behaviors.

- Explain how to develop a home-safety and emergency response plan such as fire safety.
- Identify strategies for avoiding deliberate and accidental injuries such as gang violence and accidents at school and home.
- Identify types of abuse such as physical, emotional, and sexual and know ways to seek help from a parent and/or trusted adult.

Health Education, Grade 5: Health Behaviors.

- Demonstrate strategies for preventing and responding to deliberate and accidental injuries.
- Describe response procedures for emergency situations.
- Describe the value of seeking advice from parents and educational personnel about unsafe behaviors.

- Explain the impact of neglect and abuse.

Middle School

Health Education, Grade 6: Health Behaviors.

- Demonstrate an understanding of basic first-aid procedures.
- Demonstrate strategies for the prevention of and response to deliberate and accidental injuries such as using conflict resolution skills instead of fighting, or wearing a seat belt.

Health Education, Grades 7-8: Health Behaviors.

- Analyze and demonstrate strategies for preventing and responding to deliberate and accidental injuries.
- Demonstrate basic first-aid procedures including Cardiopulmonary Resuscitation (CPR) and the choking rescue.
- These grade levels must also be aware of the dangers of weapons and illegal substances. They are also to be aware of the consequences of unprotected sex and sexual activity in general.

High School

Health Education, Grades 9-10: Health Behaviors.

- Analyze strategies for preventing and responding to deliberate and accidental injuries.
- Analyze the relationship between the use of refusal skills and the avoidance of unsafe situations such as sexual abstinence.

Advanced Health, Grades 11-12: Health Behaviors.

- Participate in school-related efforts to address health-risk behaviors.

- Develop educational-safety models for children and adults for use at home, school, and in the community.[4]

The Following is the policy statement of the American Academy of Pediatrics (AAP) regarding Office-Based Counseling for Injury Prevention[5]:

> All children deserve to live in a safe environment. Anticipatory guidance for injury prevention should be an integral part of the medical care provided for all infants, children, and adolescents. This guidance needs to be appropriate for the child's age and locale. Initially it is necessary for the counseling to be directed toward the parent as both the role model for the child's behavior and the person who is most capable of modifying the child's environment. As children mature, counseling should be directed increasingly toward the child or adolescent as they become responsible for their own behavior. Physicians are encouraged to document injury prevention counseling in the medical record.

Infants and Preschoolers

Healthcare providers caring for infants and preschool children should advise parents about the following issues:

Traffic Safety: The appropriate use of currently approved child safety restraints needs to be discussed. Use of a car seat should begin with the first ride home from the hospital. Parents need to be reminded of the importance of using their own seat belts.

Burn Prevention: Smoke detectors in the home should be installed and maintained. Hot water temperatures should be set between 120deg.F and 130deg.F to avoid scald burns.

Fall Prevention: Window and stairway guards/gates are necessary to prevent falls. Discourage the use of infant walkers.

Poison Prevention: Medicines and household products should be kept out of the sight and reach of children. These items should be purchased and kept in original childproof

containers. Parents need to have a 1-ounce bottle of syrup of ipecac in the home for use as advised by the pediatrician.

Drowning Prevention: Because very young babies drown most commonly in bathtubs and buckets while unsupervised, advise parents to empty and properly store buckets immediately after use and to never leave infants or young children in the bathtub without constant adult supervision. Backyard swimming pools or spas need to be completely fenced to separate them from the house and yard. Although children younger than 5 years old often take swimming lessons, they should never swim unsupervised. It is unlikely that infants can be made "water safe"; in fact the parents of these infants may develop a false sense of security if they believe that their infant can "swim" a few strokes.

It is important that parents become trained in infant and child cardiopulmonary resuscitation (CPR) and learn how to access their local emergency care system (eg, 911).

School Age Children

Advice to the parents of elementary school age children begins to be more focused on the child's behavior. The child is included in this process as well while the parents are again reminded of their need to model safe behaviors.

Traffic Safety: The use of seat belts should continue to be emphasized. Remind children and parents that no one should ride in the bed of a pickup truck. All-terrain vehicles should not be used by children less than 16 years of age. Review safe pedestrian practices. Approved bicycle helmets should be worn on every bike ride. The use of protective equipment for in-line skating and skateboarding needs emphasis.

Water Safety: Children 5 years of age and older should be taught to swim and, at the same time, taught appropriate rules for water play. Children must never be allowed to swim alone. Coast Guard-approved personal flotation devices (PFDs) should be worn by every child engaged in any boating activity.

Sports Safety: Adults who supervise children participating in organized sports programs need to emphasize the importance of safety equipment for the particular sport as well as appropriate physical conditioning for that sport.

Firearm Safety: Because of the dangers that in-home firearms, particularly handguns, pose to young children, parents should be encouraged to keep handguns out of the home. If parents choose to keep a firearm in the home, the unloaded gun and ammunition must be kept in separate locked cabinets.

Adolescents

Injury prevention advice to adolescents should be included in a broader discussion of healthy lifestyle choices, especially alcohol or other drug use. Pediatricians, parents, and schools should remain united in their efforts to promote community choices that, by modifying the adolescent environment, make adolescent risk-taking less likely to result in significant injury. Alcohol-free proms, designated driver programs, and bicycle helmet legislation are examples. Since peer influence often overshadows parental influence, programs such as those teaching conflict resolution and skills to counter negative peer pressure and to reduce risk-taking behavior show promise as other methods to reduce adolescent injury.

Specific areas of injury prevention guidance should include the following:

Traffic Safety: Encourage seat belt use and discuss the role of alcohol in teenage motor vehicle accidents. Motorcycle helmets and bicycle helmets should be worn on every ride. The use of protective equipment for in-line skating and skateboarding needs emphasis.

Water Safety: Discuss alcohol use in water-related activities for teens, especially as it relates to diving injuries. The use of Coast Guard-approved personal flotation devices (PFDs) in boating needs to be reviewed.

Sports Safety: Adolescents participating in organized sports programs need to be reminded of the importance of safety equipment for their particular sport as well as appropriate physical conditioning for that sport.

Firearm Safety: In-home firearms are particularly dangerous during adolescence due to the potential for impulsive, unplanned use by teens resulting in either suicide, homicide,

or other serious injuries. If parents choose to keep a firearm in the home, the unloaded gun and ammunition must be kept in separate locked cabinets.

Conclusion

Injury remains the leading cause of childhood and adolescent death and disability. Appropriate counseling by pediatricians can alert parents and children to many risky behaviors or environments. Appropriate behavior or environmental change by parents and children will be needed to decrease the number of children with significant injury. [6]

The National School Safety Center has an excellent handout describing different strategies to help integrate and implement school safety[7]. This handout discusses various primary strategies, including working with school board members to encourage them to realize the importance of public support for school safety. It also discusses how to work with school employees, students, parents, community leaders, service groups, business leaders, government representatives, law enforcers, and the media to develop a school safety program.

Substance Use and Abuse

Substance abuse is recognized as a health problem and a symptom of physical, social, and/or emotional problems among children and youth. Drug abuse, alcohol consumption, and tobacco use are increasing among the school age population. Substance use and abuse is the largest preventable cause of illness and premature death in the United States.

Problems with alcohol and other drugs cause pervasive damage in every segment of our society and have no age, race, ethnic, or gender boundaries. Alcohol and other drug problems in youth are associated with difficulties such as disrupted childhoods and stressful relationships with family and friends. They are also the cause of preventable injuries and disease. If untreated, alcohol and other drug problems continue into adulthood, becoming more severe and complicated and having increasingly negative consequences for one's life. Therefore, establishing an effective and comprehensive alcohol, tobacco, and other drug prevention program in schools is a top priority.[8]

Although all youth are potentially at risk for substance abuse, those with low expectations for education, low school achievement in junior high, school truancy and misconduct records, low resistance to peer influence and peer use of substance, lack of belief that use is harmful, and lack of parental support are most at risk. Other groups at risk include youth from families of substance abusers, youth with physical disabilities, who may drink or take drugs as a way of coping with feelings of isolation and different ness, gay and lesbian youth, who may turn to substances as a way of fitting in, or refugee or immigrant youth, trying to cope with difficulty in adapting to their new surroundings.

Recent studies show that boys and girls are about equally likely to report using harmful substances. Boys are more likely to be heavy users of alcohol and other drugs and are more likely to be involved in physical fights and serious crimes. Adolescent girls may be at risk for substance abuse if they experience limitations on their behavior, leading to conflict between their feelings and the roles they are expected to play.[9]

School Prevention Programs

An effective substance abuse prevention program is part of a comprehensive health promotion plan that links alcohol and other drug issues with prevention of tobacco use, violence, unintended pregnancy, and HIV/AIDS. A prevention program has the following key components:

- Policy: It states the school's goals and plan of action for preventing and responding to problems. It also establishes a process to regularly reexamine the climate of the school to identify and reduce risk factors that contribute to alcohol, tobacco, and other drugs and to enhance factors that increase student resiliency and prevent use. The policy recognizes the relationship between the school, community, and home.

- Curriculum: A planned, sequential, developmentally appropriate, and culturally sensitive comprehensive health education pre-K through 12 curriculum is designed to influence students' knowledge, attitudes, and behavior related to alcohol, tobacco, and other drugs, and promote support for students in need of additional help and services. Such a curriculum reinforces the promotion of health choices, and through skill

training, reduces the risks of a wide range of health problems that can affect students.

- Identification, support and referral system: This system provides the necessary link between the instructional functions of the school and its guidance, counseling, and human service delivery programs. It consists of a team of educational and human service professionals whose purpose is to identify and refer students, to provide ongoing case management, and to recommend policy and program changes that improve school climate and educational and support services for students. Its primary goal is early intervention. These programs are sometimes called "intervention" or "student assistance programs." In some cases, counseling and treatment groups are provided on-site by in-house counselors or community agencies, which may also provide support groups for youths in recovery from alcoholism and/or drug addiction and children of alcoholic or drug-addicted parents.

- Professional Development: Professional development activities provide guidance to teachers delivering instruction, are coordinated with staff development in other curricular areas, reflect a commitment to the overall school community, provide opportunities for staff to reflect and plan for a healthier school that promotes positive interpersonal relationships, and provide opportunities to develop skills as team members. In order to be effective, training requires system-wide support.

- In-service training: In-service training consists of (1) awareness: personal awareness and readiness to teach about alcohol, tobacco, other drugs, and related issues such as AIDS; (2) information: understanding of alcohol, tobacco, and other drugs, AIDS, school policies and procedures, school and community prevention efforts, intervention strategies, and treatment services; and (3) skills: ability to facilitate behavioral skills training in classroom settings, discuss issues and implement lesson plans and materials, and the ability to work with parents and children effectively.

- Peer education/leadership: Peer leaders can participate in prevention activities, provide one-on-one support of other students, and present

educational sessions for students, parents, or school committees and community service projects. Peer leaders can develop skills in helping other students who are experiencing difficulty, including problems with alcohol, tobacco, and other drugs, AIDS, safety, conflict resolution, depression, divorce, suicide, dating and sexuality, eating disorders, gay and lesbian issues, and multicultural issues. Essential steps in conducting peer leader programs are identifying, recruiting, and selecting peer advisors, providing peer leadership training and support, and ensuring program implementation and follow-up.

- Community collaboration: The school solicits assistance from the community to provide organizational and financial support for improved and increased school-based prevention programs. This would include the school-community task force that addresses such issues as availability of community treatment and prevention resources, as well as alcohol and tobacco products (e.g., vending machine policies). Media-based programs help promote abstinence and abuse prevention practices by spreading messages about non-use. Such programs can be based on a particular theme, such as a certain drug, or issues like drinking and driving. Media strategies include radio ads, programs, talk shows, television, films, ads, articles and ads in local newspapers, letters to the editor, and posters and fliers distributed through community businesses, civic organizations, and religious organizations.

- Family education: Parents, guardians, and extended family members can play a valuable and central role in preventing alcohol, tobacco, and drug use and related problems. They can reinforce the school program at home and can provide support to the program in the community. In cases where family members are abusing alcohol, tobacco, or drugs, education programs that include identification of community resources should be offered.

- Systemic school change and restructuring efforts: The way a school is organized influences student behavior and attitudes toward substance use and abuse. Schools that have the following program elements have proven effective in reducing substance abuse:

- Fostering of positive and supportive adult-student relationships;
- Fostering positive peer relationships;
- Creating appropriate and high expectations for all students;
- Emphasizing student involvement in decision making (in school governance, instruction on social skills, cooperative problem solving);
- Promoting a school climate that respects and celebrates cultural differences; and
- Providing information regarding resources available for addiction and staff support for those involved in these programs.

- Evaluation: An evaluation measures the impact of the prevention efforts and helps maintain school committee and community support. Evaluations may measure changes in student knowledge and attitudes concerning alcohol, tobacco, and other drugs, the degree to which a school's goals are met in any given period of time, and changes in knowledge, attitude, and behavior of the adults working in the school community. Evaluation results are the most important documents a school can use to solicit community support for the continuation or expansion of a program.

Studies of school-based substance abuse prevention programs have yielded the following recommendations:

- Programs that increase students knowledge about the dangers of substance abuse must be complemented by activities designed to teach skills to resist negative social influences, and increase decision making, risk analysis, stress management, and coping skills, as well as sensitivity to different life-styles and cultures. Role-playing is one effective method of imparting and practicing these skills.

- Approaches using peer leadership combined with peer-to-peer and teacher instruction are most effective. Peer leaders not only provide information in a way other students can relate to but are themselves examples of empowered youth with a sense of pride and self-worth.

- An effective component of a substance abuse program is looking at the impact of advertising and how entertainment glamorizes the use of harmful substances and rarely shows negative consequences.

- Student confidentiality must be respected; breach of confidentiality may prevent youth from seeking assistance or may skew reporting of behaviors when programs are evaluated for effectiveness.

- Programs should be culturally and linguistically sensitive and appropriate and should provide for youth with disabilities, gay and lesbian youth, and other students with special needs.

- One school program showed that a take-home curriculum about substance abuse prevention was more effective in changing students' perceptions of peer use because it increased parent-student communication about drugs and resisting peer pressure.

- Early intervention is effective when substance abuse is suspected. School personnel can be trained to look for indicators of high-risk behavior and make referrals (See also the "Special Populations: Substance Abuse" section in Chapter 6 of this manual).

- Although some youth at risk become abusers, many do not. Programs can foster resiliency and build on the protective factors that shield some youth from participating in high-risk behaviors. Examples of programs that enhance protective factors are drug- and alcohol-free alternative recreational activities, and mentoring and community service learning activities.

The Texas Education Agency has adopted substance abuse prevention as part of the required curriculum for Texas students. The Texas Essential Knowledge and Skills for Health Education contains the following criteria regarding substance abuse for the K-12 curriculum:[10]

- Kindergarten: The student understands that behaviors result in healthy or unhealthy conditions throughout the lifespan. The student is expected to name the harmful effects of tobacco, alcohol, and other drugs.

- Grade 1: The student understands that safe, unsafe, and/or harmful behaviors result in positive and negative consequences throughout the life span. The student is expected to explain the harmful effects of, and how to avoid, alcohol, tobacco, and other drugs.

- Grade 2: The student understands that safe, unsafe, and/or harmful behaviors result in positive and negative consequences throughout the life span. The student is expected to identify and describe the harmful effects of alcohol, tobacco, and other drugs on the body.

- Grade 3: The student recognizes and performs behaviors that reduce health risks throughout the life span. The student is expected to describe the harmful effects of alcohol, tobacco, and other drugs on physical, mental, and social health and why people should not use them, and identify reasons for avoiding violence, gangs, weapons, and drugs.

- Grade 4: The student understands and engages in behaviors that reduce health risks throughout the life span. The student is expected to identify the use and abuse of prescription and non-prescription medication such as over-the-counter; explain the similarities of and the differences between medications and street drugs/substances; describe the short-term and long-term harmful effects of tobacco, alcohol, and other substances such as physical, mental, social, and legal consequences; and identify ways to avoid drugs and list alternatives for the use of drugs and other substances.

- Grade 5: The student recognizes behaviors that prevent disease and speed recovery from illness. The student is expected to explain how to maintain the healthy status of body systems such as avoiding smoking to protect the lungs. The student comprehends behaviors that reduce health risks throughout the life span. The student is expected to describe the use and abuse of prescription and non-prescription medications such as over-the-counter; compare and contrast the effects of medications and street drugs;

analyze the short-term and long-term harmful effects of alcohol, tobacco, and other substances on the functions of the body systems such as physical, mental, social, and legal consequences; identify and describe alternatives to drug and substance use; and explain strategies for avoiding violence, gangs, weapons, and drugs.

- Grade 6: The student engages in behaviors that reduce health risks throughout the life span. The student is expected to analyze the use and abuse of prescriptions and non-prescription medications such as over-the-counter; examine social influences on drug-taking behaviors; describe chemical dependency and addiction to tobacco, alcohol, and other drugs and substances; explain the relationship between tobacco, alcohol, drugs, and other substances and the role these items play in unsafe situations such as drinking and driving and Human Immunodeficiency Virus (HIV)/Sexually Transmitted Disease (STD) transmission; identify ways to prevent the use of tobacco, alcohol, drugs, and other substances such as alternative activities; and identify and describe strategies for avoiding drugs, violence, gangs, weapons, and other harmful situations.

- Grades 7-8: The student engages in behaviors that reduce health risks throughout the life span. The student is expected to explain the impact of chemical dependency and addiction to tobacco, alcohol, drugs and other substances; relate medicine and other drug use to communicable disease, prenatal health, health problems in later life, and other adverse consequences; identify ways to prevent the use of tobacco, alcohol, and other drugs such as alternative activities; apply strategies for avoiding violence, gangs, weapons, and drugs; and explain the importance of complying with rules prohibiting possession of drugs and weapons.

- Grades 9-10: The student analyzes the relationship between unsafe behaviors and personal health and develops strategies to promote resiliency throughout the life span. The student is expected to analyze the harmful effects of alcohol, tobacco, drugs, and other substances such as physical, mental, social, and legal consequences; explain the relationship between alcohol, tobacco, and other drugs/substances used by adolescents and the role these substances play in unsafe situations such as Human

Immunodeficiency Virus (HIV)/sexually transmitted disease (STD), unplanned pregnancies, and motor vehicle accidents; develop strategies for preventing use of tobacco, alcohol, and other addictive substances; analyze the importance of alternatives to drug and substance use; and analyze and apply strategies for avoiding violence, gangs, weapons, and drugs. The student synthesizes information and applies critical-thinking, decision-making, and problem-solving skills for making health-promoting decisions throughout the life span. The student is expected to associate risk-taking with consequences such as drinking and driving.

- Grades 11-12: The student evaluates the validity of health information. The student is expected to evaluate the impact of laws relating to the use of medication, alcohol, tobacco, and other drugs/substances. The student generates strategies that address health-risk behaviors. The student is expected to evaluate the impact of laws relating to tobacco, alcohol, drugs and other substances; investigate treatment plans for drug addiction; and describe the interrelatedness of alcohol and other drugs to health problems such as drugs and date rape, Human Immunodeficiency Virus (HIV)/sexually transmitted disease (STD), and drinking and driving.

It is essential to remember that many of the symptoms of substance abuse are common characteristics of young people, especially in adolescence. This means extreme caution must be exercised to avoid misidentifying and inappropriately stigmatizing a youngster. Never overestimate the significance of a few indicators. Below are lists of risk factors for alcohol and drug abuse that can aid in differentiating substance abuse from typical adolescent behavior.

Alcohol Abuse

Alcohol abuse and alcohol dependence affect a significant number of adolescents and young adults between the ages of 12 and 20. While alcohol use often stems from curiosity, for some adolescents, it can lead to an abusive and addictive pattern that requires intervention.[11]

Risk Factors

The following are risk factors for alcohol use among children and adolescents:[12]

- Genetic Factors: Children of alcoholics are significantly more likely to initiate drinking during adolescence and to develop alcohol use disorders, but the relative influences of environment and genetics have not been determined and vary among young people.

- Childhood Behavior: Research has shown that children who are very restless and impulsive at age 3 are twice as likely to be diagnosed with alcohol dependency at age 21. Aggressiveness in children as young as ages 5 to 10 has been found to predict alcohol and other drug use in adolescence.

- Psychiatric Disorders: Among 12- to 16-year-olds, regular alcohol use has been significantly associated with conduct disorder; in one study, adolescents who reported higher levels of drinking were more likely to have conduct disorder. Whether anxiety and depression lead to, or are consequences of, alcohol abuse is unresolved. In a study of adolescents in residential treatment for alcohol and illicit drug dependence, 25 percent met the DSM-III criteria for depression—three times the rate reported for controls. In 43 percent of these cases, the onset of alcohol and/or illicit drug dependence preceded the depression; in 35 percent, the depression occurred first and in 22 percent, the disorders occurred simultaneously.

- Suicidal Behavior: Alcohol use among adolescents has been associated with considering, planning, attempting, and completing suicide. In one study, 37 percent of 8th grade females who drank heavily reported attempting suicide, compared with 11 percent who did not drink. Research does not indicate whether drinking causes suicidal behavior, only that the two behaviors are correlated.

- Parental and Peer Influences: Parents' drinking behavior and favorable attitudes about drinking have been associated with adolescents' initiating and continuing drinking. Early initiating of drinking has been identified as an important risk factor for later alcohol-related problems. Lack of parental support, monitoring, and communication also has been significantly related to frequency of drinking, heavy drinking, and

drunkenness among adolescents. Peer drinking and acceptance also influences adolescent drinking behaviors.

- Expectancies: Positive expectations from alcohol use have been found to increase with age and to predict the onset of drinking among adolescents.

Additional risk factors include:

- Being a sibling of an adolescent who uses alcohol and illicit drugs;
- Experiencing learning disorders or other academic problems;
- Delinquency; and
- Teen pregnancy.[13]

Signs of Alcohol Abuse

Most adolescents will experiment with alcohol, but not abuse alcohol. Signs of teenage alcohol abuse include:

- Physical: fatigue, repeated health complaints, red and glazed eyes, and a lasting cough;
- Emotional: personality change, sudden mood changes, irritability, irresponsible behavior, low self-esteem, poor judgment, depression, and a general lack of interest;
- Family: starting arguments, breaking rules, or withdrawing from the family;
- School: decreased interest, negative attitude, drop in grades, many absences, truancy, and discipline problems; and
- Social problems: new friends who are less interested in standard home and school activities, problems with the law, and changes to less conventional styles in dress and music.[14]

Drug Abuse

School personnel play a crucial role in preventing the use of harmful substances by school-aged youth. Harmful substances include alcohol (beer, wine, wine coolers, hard liquor), marijuana, hashish, MDMA ("X" or ecstasy), cocaine, crack cocaine, steroids,

inhalants (glue, aerosols, nitrous oxide), psychedelics (LSD, mescaline, PCP), amphetamines (speed, uppers, Dexedrine), barbiturates, tranquilizers, narcotics (heroin, opium, morphine, Demerol, Percodan), and over-the-counter drugs. The abuse of alcohol and other drugs may be linked to other public health problems, such as unplanned pregnancy, violence, and abuse. Tobacco is also a powerful drug that may serve as a precursor to other drug abuse.[15] See Exhibit 1 for a chart of commonly used and abused drugs.

The types of indicators usually identified include a prevailing pattern of unusual and excessive behaviors and moods, and recent dramatic changes in behavior and mood. School staff and those in the home need to watch for:

- Poor school performance, skipping or ditching school;
- Inability to cope well with daily events;
- Lack of attention to hygiene, grooming, and dress;
- Long periods alone in bedroom/bathroom apparently doing nothing;
- Extreme defensiveness, negative attitudes, dissatisfaction about most things;
- Frequent conflicts with others, verbal/physical abuse;
- Withdrawal from long-time friends/family/activities;
- Disregard for others, extreme egocentricity;
- Taking up with new friends who may be drug users;
- Unusual tension or depressed states;
- Seems frequently confused and "spacey";
- Frequent drowsiness;
- General unresponsiveness to what's going on (seems "turned off");
- Increasing need for money, disappearance of possessions (e.g., perhaps sold to buy drugs), stealing/shoplifting;
- Excessive efforts to mislead (lying, conning, untrustworthy, insincere);
- Stooped appearance and posture;
- Dull or watery eyes, dilated or pinpoint pupils;
- Sniffles, runny nose; and/or
- Overt indicators of substance abuse (e.g., drug equipment, needle marks).

In the period just after an individual has used drugs, one might notice mood and behavioral swings—first euphoria, perhaps some unusual activity and/or excessive

talking, sometimes a tendency to appear serene, and after a while there may be a swing toward a depressed state and withdrawal. Sometimes the individual will stare glossy-like at one thing for a long time.[16]

The use of alcohol and other drugs is strictly forbidden on school grounds, according to a United States Department of Education regulation and the Drug-Free Schools Certification regulations, as well as numerous state and local ordinances.[17] See Appendix A at the end of this manual for state laws regarding substance use on school grounds and at school-related events.

Tobacco Use

The Texas Administrative Code requires education about the use of tobacco as part of its substance abuse prevention curriculum (Texas Essential Knowledge and Skills for Health Education). The specific knowledge and skills that students are expected to demonstrate, by grade, are those listed on pp. 14-17 of this chapter (see above).[18].

Facts on Youth Smoking, Health, and Performance[19]:

- Among young people, the short-term health effects of smoking include damage to the respiratory system, addiction to nicotine, and the associated risk of other drug use. Long-term health consequences of youth smoking are reinforced by the fact that most young people who smoke regularly continue to smoke throughout adulthood.
- Smoking hurts young people's physical fitness in terms of both performance and endurance---even among people trained in competitive running.
- Smoking among youth can hamper the rate of lung growth and the level of maximum lung function.
- The resting heart rates of young adult smokers are two to three beats per minute faster than those of nonsmokers.
- Among young people, regular smoking is responsible for cough and increased frequency and severity of respiratory illnesses.
- The younger people start smoking cigarettes, the more likely they are to become strongly addicted to nicotine.

- Teens who smoke are three times more likely than nonsmokers to use alcohol, eight times more likely to use marijuana, and 22 times more likely to use cocaine. Smoking is associated with a host of other risky behaviors, such as fighting and engaging in unprotected sex.
- Smoking is associated with poor overall health and a variety of short-term adverse health effects in young people and may also be a marker for underlying mental health problems, such as depression, among adolescents. High school seniors who are regular smokers and begin smoking by age nine are:
    - 2.4 times more likely than their nonsmoking peers to report poorer overall health.
    - 2.4 to 2.7 times more likely to report cough with phlegm or blood, shortness of breath when not exercising, and wheezing or gasping.
    - 3.0 times more likely to have seen a doctor or other health professional for an emotional or psychological complaint.

Incidence of Initiation of Cigarette Smoking Among U.S. Teens[20]:

- More than 6,000 persons under the age of 18 years try their first cigarette each day. More than 3,000 persons under the age of 18 years become daily smokers every day.
- Among persons aged 12-17 years, the incidence of first use of cigarettes per 1,000 potential new users has been rising continuously during the 1990s and has been steadily higher than for persons aged 18-25 years since the early 1970s.
- At least 4.5 million adolescents (aged 12-17 years) in the United States smoke cigarettes.
- Seventy percent of adolescent smokers wish they had never started smoking in the first place.
- To prevent initiation of tobacco use and to help adolescents quit requires a comprehensive approach. This approach should include: increasing tobacco prices; reducing the access and appeal of tobacco products; conducting mass media campaigns and school-based tobacco use prevention programs; increasing provision of smoke-free indoor air;

regulating tobacco products; decreasing tobacco use by parents, teachers, and influential role models; developing and disseminating effective youth cessation programs; and increasing support and involvement from parents and schools.

Tobacco Use by Young People[21]

Each day, approximately 6,000 young people try a cigarette, and 3,000 become daily smokers[22]. If current tobacco use patterns persist, an estimated 5 million people who were younger than 18 years old in 1995 will die prematurely from a smoking-related illness[23]. The proportion of high school students who smoke increased from 28% in 1991 to 35% in 1995[24]. In 1995, 16% of high school students were frequent smokers (i.e., had smoked cigarettes on 20 or more of the 30 preceding days). Non-Hispanic white high school students are about twice as likely to smoke cigarettes as non-Hispanic black students (38% vs. 19%). However, the prevalence of smoking among non-Hispanic black male high school students doubled from 14% in 1991 to 28% in 1995.

Among people who have ever smoked daily, 89% tried their first cigarette and 71% began smoking daily before age 19. The average age at which smokers try their first cigarette is 14.5 years; 25% of high school students smoked a whole cigarette before age 13.5 year. More than 11% of high school students (20% of males and 2% of females) use smokeless tobacco. In some states, more than 1 of every 3 male high school students use smokeless tobacco[25]. Among high school seniors who use smokeless tobacco, almost 75% began before the 9th grade. Adolescents who use smokeless tobacco are more likely than nonusers to become cigarette smokers. Twenty seven percent of high school students report having smoked a cigar in the past year.

Health Effects of Tobacco Use By Young People[26]

Cigarette smoking causes heart disease; stroke; chronic lung disease; and cancers of the lung, mouth, pharynx, esophagus, and bladder[27]. Cigarette smoking by young people leads to serious health problems, including cough and phlegm production, an increase in the number and severity of respiratory illnesses, decreased physical fitness, adverse changes in blood cholesterol levels, and reduced rates of lung growth and function. Use of smokeless tobacco causes cancers of the mouth, pharynx, and esophagus; gum recession; and an increased risk for heart disease and stroke. Smoking cigars increases the risk of oral, laryngeal, esophageal, and lung cancers[28].

Nicotine Addiction Among Adolescents[29]

Several studies have found nicotine to be addictive in ways similar to heroin, cocaine, and alcohol. Because the typical tobacco user receives daily and repeated doses of nicotine, addiction is more common among tobacco users than among other drug users. Of all addictive behaviors, cigarette smoking is the one most likely to become established during adolescence. Eighty four percent of teenagers aged 12–17 consider themselves addicted. The younger people are when they start to smoke cigarettes, the more likely they are to become strongly addicted to nicotine[30]. Young people who try to quit smoking suffer the same nicotine withdrawal symptoms as adults who try to quit. About 2 out of 3 teenage smokers say they want to quit; 3 out of 4 teenage smokers have made at least one serious attempt to quit smoking; and 70% say that if they could choose again, they would never start smoking[31]. Only 5% of high school seniors who smoke daily think they will be smoking in 5 years—but almost 75% of them are still smokers 5 years later[32].

Tobacco Sales and Promotion to Youth[33]

All states have laws making it illegal to sell cigarettes to anyone under the age of 18, yet 39% of high school students younger than 18 who smoke say they usually buy cigarettes in a store. Among high school students younger than age 18 who smoke, 78% report not being asked for proof of age when they buy cigarettes in a store. The tobacco industry generated about $190 million in profit from the illegal sale of cigarettes to minors in 1991. In that year, teenagers smoked an average of 28.3 million cigarettes per day[34]. About 86% of adolescent smokers who bought their own cigarettes in 1993 bought Marlboro, Camel, or Newport---the 3 most heavily advertised brands. However, these brands accounted for only 32% of all cigarettes sold that year[35]. In a 1991 survey, 30% of 3-year-olds and 91% of 6-year-olds recognized the Joe Camel character (the same recognition level for Mickey Mouse) and linked him to cigarettes.

Tips for Parents to Help Keep Their Kids Tobacco Free[36]:

- Despite the impact of movies, music, and TV, Parents can be the GREATEST INFLUENCE in their kids' lives.
- Take a stand at home, early and often.
- Talk directly to children about the risks of tobacco use; if friends or relatives died from tobacco-related illnesses, let your kids know.

- If you use tobacco, you can still make a difference. Your best move, of course, is to try to quit. Meanwhile, don't use tobacco in your children's presence, don't offer it to them, and don't leave it where they can easily get to it.
- Start the dialogue about tobacco use at age 5 or 6 and continue through their high school years. Many kids start using tobacco by age 11, and many are addicted by age 14.
- Know if your kids' friends use tobacco. Talk about ways to refuse tobacco.
- Discuss with kids the false glamorization of tobacco on billboards, and other media, such as movies, TV, and magazines.

Tobacco use is the single most preventable cause of death in the United States, causing heart and lung disease, cancers, and strokes.[37] The Centers for Disease Control and Prevention's (CDC) guidelines regarding the prevention of tobacco use and addiction among teens have been printed and included in the following pages. All guidelines and the complete report, *CDC's Guidelines for School Health Programs Preventing Tobacco Use and Addiction*, are available on the World Wide Web at http://www.cdc.gov/nccdphp/dash/nutptua.htm

CDC's Guidelines for School Health Programs

Preventing Tobacco Use and Addiction

An Overview

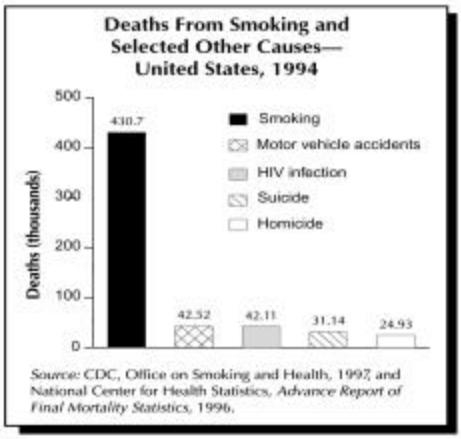
Each day, more than 3,000 young people across the United States become daily smokers. Most start this deadly habit not fully understanding that nicotine in tobacco is as addictive as heroin, cocaine, or alcohol. Most also underestimate the health consequences, even though tobacco use is the leading cause of preventable death in the United States. School programs to prevent tobacco use among young people can make a major contribution to the health of the nation, particularly when these programs are combined with community efforts.

Benefits of Preventing Tobacco Use Among Young People

- Helps prevent long-term health problems and premature death.
- Promotes optimal health and decreases school days missed because of respiratory illnesses.
- Dramatically decreases the likelihood that a young person will be a regular tobacco user as an adult.

Consequences of Tobacco Use

- Tobacco use causes more premature deaths in the United States than any other preventable risk. Of all people younger than age 18 years in 1995, an estimated 5 million will die prematurely from smoking-related illnesses.
- Cigarette smoking causes heart disease; stroke; chronic lung disease; and cancers of the lung, mouth, pharynx, esophagus, and bladder.
- Cigarette smoking increases coughs, shortness of breath, and respiratory illnesses; decreases physical fitness; and adversely affects blood cholesterol levels.



Source: CDC, Office on Smoking and Health, 1997, and National Center for Health Statistics, *Advance Report of Final Mortality Statistics*, 1996.

- Smokeless tobacco is not a safe alternative to cigarettes. Using it causes cancers of the mouth, pharynx, and esophagus; gum recession; and an increased risk for heart disease and stroke.

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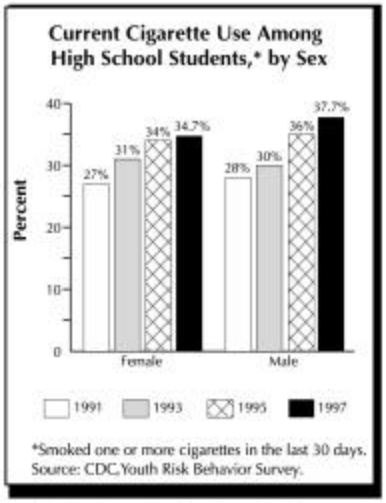
- Smoking cigars increases the risk of oral, laryngeal, esophageal, and lung cancers.
- Second-hand tobacco smoke can cause respiratory illness and lung cancer and can trigger asthma attacks.
- Tobacco use causes stained teeth, bad breath, and foul-smelling hair and clothes.

Tobacco Use by Teens

- The rate of teen smoking is rising: 36% of high school students were current smokers in 1997, compared with 28% in 1991.
- Of high school students, 70% have tried cigarettes.
- The younger people are when they start using tobacco, the more likely they are to become strongly addicted to nicotine.
- Of persons who ever smoked daily, 89% first tried a cigarette before age 18.
- Twenty-five percent of high school students smoked a whole cigarette before age 13.
- Nine percent of high school students use smokeless (snuff or chewing) tobacco; 22% have smoked a cigar in the last 30 days.
- Three out of four teenage smokers have tried to quit at least once—but failed.



The Opportunity

Well-designed, well-implemented school programs to prevent tobacco use and addiction

- Have proved effective in preventing tobacco use.
- Provide prevention education during the years when the risk of becoming addicted to tobacco is greatest.
- Provide a tobacco-free environment that establishes nonuse of tobacco as a norm and offers opportunities for positive role modeling.
- Can help prevent the use of other drugs, especially if the program addresses the use of these substances.

CDC's Guidelines for School Programs to Prevent Tobacco Use

CDC's Guidelines for School Health Programs to Prevent Tobacco Use and Addiction *were designed to help achieve national health and education goals. They were developed in collaboration with experts from 29 national, federal, and voluntary agencies and are based on an extensive review of research and practice.*

Key Principles

School programs to prevent tobacco use and addiction will be most effective if they

- Prohibit tobacco use at all school facilities and events.
- Encourage and help students and staff to quit using tobacco.
- Provide developmentally appropriate instruction in grades K–12 that addresses the social and psychological causes of tobacco use.
- Are part of a coordinated school health program through which teachers, students, families, administrators, and community leaders deliver consistent messages about tobacco use.
- Are reinforced by community-wide efforts to prevent tobacco use and addiction.

Recommendations

The guidelines include seven recommendations for ensuring a quality school program to prevent tobacco use.

1 Policy

Develop and enforce a school policy on tobacco use. The policy, developed in collaboration with students, parents, school staff, health professionals, and school boards, should

- Prohibit students, staff, parents, and visitors from using tobacco on school premises, in school vehicles, and at school functions.
- Prohibit tobacco advertising (e.g., on signs, T-shirts, or caps or through sponsorship of school events) in school buildings, at school functions, and in school publications.
- Require that all students receive instruction on avoiding tobacco use.
- Provide access and referral to cessation programs for students and staff.
- Help students who violate smoking policies to quit smoking rather than just punishing them.

2 Instruction

Provide instruction about the short- and long-term negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills. This instruction should

- Decrease the social acceptability of tobacco use and show that most young people do not smoke.

- Help students understand why young people start to use tobacco and identify more positive activities to meet their goals.
- Develop students' skills in assertiveness, goal setting, problem solving, and resisting pressure from the media and peers to use tobacco.

Programs that only discuss tobacco's harmful effects or attempt to instill fear do not prevent tobacco use.

3 Curriculum

Provide tobacco-use prevention education in grades K–12.

- This instruction should be introduced in elementary school and intensified in middle/junior high school, when students are exposed to older students who typically use tobacco at higher rates.
- Reinforcement throughout high school is essential to ensure that successes in preventing tobacco use do not dissipate over time.

4 Training

Provide program-specific training for teachers. The training should include reviewing the curriculum, modeling instructional activities, and providing opportunities to practice implementing the lessons. Well-trained peer leaders can be an important adjunct to teacher-led instruction.

5 Family Involvement

Involve parents or families in supporting school-based programs to prevent tobacco use. Schools should

- Promote discussions at home about tobacco use by assigning homework and projects that involve families.
- Encourage parents to participate in community efforts to prevent tobacco use and addiction.

6 Tobacco Cessation Efforts

Support cessation efforts among students and school staff who use tobacco. Schools should provide access to cessation programs that help students and staff stop using tobacco rather than punishing them for violating tobacco-use policies.

7 Evaluation

Assess the tobacco-use prevention program at regular intervals. Schools can use CDC's *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction* to assess whether they are providing effective policies, curricula, training, family involvement, and cessation programs.

Preventing Tobacco Use and Addiction Among Young People

How You Can Help

Everyone can play a part in helping young people avoid using tobacco products. If you are a parent or guardian, student, teacher, athletic coach, school administrator or board member, health professional, or anyone else who cares about the health of young people, here are some steps you can take to make a difference in their lives.

Everyone Can

- ✔ Teach young people that using cigarettes, cigars, and smokeless tobacco (snuff or chew) puts them at risk for health problems and addiction.
- ✔ Voice your support for tobacco-free schools and effective tobacco-use prevention education to school administrators and board members.
- ✔ Encourage merchants to limit the number of tobacco ads in their stores, remove self-service displays, and comply with the law by checking IDs and refusing to sell tobacco products to minors.
- ✔ Ask merchants and managers of hotels and restaurants to locate vending machines where they will not be accessible to young people.
- ✔ Speak at a meeting or submit a letter to a local newspaper to discuss the importance of clean indoor air restrictions and policies that limit young people's access to tobacco products.
- ✔ Encourage coordination between school and community programs to prevent tobacco use and addiction.

Parents or Guardians Can

- ✔ Set a good example by not using tobacco and give clear, consistent messages about the dangers of tobacco to your children.
- ✔ Provide your children with a tobacco-free environment at home.
- ✔ Support comprehensive school health programs and insist that they include tobacco-use prevention education.
- ✔ Help your children who use tobacco set realistic goals for quitting and give them positive reinforcement and encouragement.
- ✔ Help your children who use tobacco identify the underlying reasons for its use and substitute positive activities, such as physical activity or stress management, to compensate.
- ✔ Help your children critically analyze messages that glamorize tobacco use on television, in movies, and in magazines and other print media.
- ✔ Join a school health committee and guide policies to prevent tobacco use.
- ✔ Volunteer to help school staff implement tobacco-use prevention activities.
- ✔ Work with the school board to provide assistance programs, rather than punishment, for students who violate tobacco-use policies.
- ✔ Share tobacco-use prevention information with your children and talk with them about related homework assignments and projects.

Students Can

- ✔ Teach peers and younger students about the importance of not using tobacco.
- ✔ Ask for and support tobacco-free schools and communities.
- ✔ Encourage the school to ban ads for tobacco products from student publications and events.
- ✔ Take elective courses in health.
- ✔ Volunteer to help in community efforts to prevent tobacco use.
- ✔ Suggest that the school paper print a story about tobacco advertising and promotion campaigns aimed at young people.

Teachers Can

- ✔ Set a good example by not using tobacco.
- ✔ Use curricula and teaching methods that meet the criteria in CDC's *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction*.
- ✔ Work with other school staff to coordinate tobacco-use prevention efforts and give students consistent, reinforced messages.
- ✔ Teach tobacco use-prevention issues in a variety of classes, such as science, history, and English.
- ✔ Encourage and support the efforts of students and school staff to quit using tobacco.
- ✔ Prohibit tobacco use by students participating in sports and stress the adverse effects of tobacco on sports performance.
- ✔ Involve families and community organizations in tobacco-use prevention activities.
- ✔ Find and use national, state, and local resources for tobacco-use prevention education.
- ✔ Participate in tobacco-use prevention training and share experiences with other teachers.
- ✔ Evaluate tobacco-use prevention activities and student progress.

School Administrators and Board Members Can

- ✔ Organize a school health committee that includes all key groups and has a mandate to develop tobacco-use prevention policies and programs based on the CDC guidelines.
- ✔ Enact and enforce policies that require school facilities, grounds, and events to be tobacco free.
- ✔ Communicate tobacco-use prevention policies to staff, students, parents, and the community.
- ✔ Require tobacco-use prevention education for students in grades K–12.
- ✔ Encourage the establishment of tobacco cessation programs for students and staff.
- ✔ Involve teachers and other staff, families, and community members in key decisions about tobacco-use prevention programs.
- ✔ Hire teachers with preservice training in preventing tobacco use and provide ongoing in-service training that focuses on teaching strategies for promoting healthy behaviors.
- ✔ Encourage activities to evaluate the effectiveness of programs to prevent tobacco use.

For more information about what you can do to prevent tobacco use among young people, please see CDC's *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction.* This document is available from CDC, Division of Adolescent and School Health, ATTN: Resource Room, 4770 Buford Highway, NE, Mailstop K-32, Atlanta, GA 30341-3717; e-mail: ccdinfo@cdc.gov; phone: (770) 488-3168; fax: (888) 282-7681; Web site: http://www.cdc.gov/nccdphp/dash.

February 2000

Tobacco and the Health of Young People

Fact Sheet

Tobacco Use by Young People

- Each day, approximately 6,000 young people try a cigarette, and 3,000 become daily smokers.[1] If current tobacco use patterns persist, an estimated 5 million people who were younger than 18 years old in 1995 will die prematurely from a smoking-related illness.[2]
- The proportion of high school students who smoke increased from 28% in 1991[3] to 35% in 1995.[4] In 1995, 16% of high school students were frequent smokers (i.e., had smoked cigarettes on 20 or more of the 30 preceding days).[4]
- Non-Hispanic white high school students are about twice as likely to smoke cigarettes as non-Hispanic black students (38% vs. 19%). However, the prevalence of smoking among non-Hispanic black male high school students doubled from 14% in 1991 to 28% in 1995.[4]
- Among people who have ever smoked daily, 89% tried their first cigarette and 71% began smoking daily before age 19. The average age at which smokers try their first cigarette is 14 ½ years; 25% of high school students smoked a whole cigarette before age 13.[5]
- More than 11% of high school students (20% of males and 2% of females) use smokeless tobacco.[4] In some states, more than 1 of every 3 male high school students use smokeless tobacco.[6]
- Among high school seniors who use smokeless tobacco, almost 75% began before the 9th grade. Adolescents who use smokeless tobacco are more likely than nonusers to become cigarette smokers.[5]
- 27% of high school students report having smoked a cigar in the past year.[7]

Health Effects of Tobacco Use by Young People

- Cigarette smoking causes heart disease; stroke; chronic lung disease; and cancers of the lung, mouth, pharynx, esophagus, and bladder.[5]
- Cigarette smoking by young people leads to serious health problems, including cough and phlegm production, an increase in the number and severity of respiratory illnesses, decreased physical fitness, adverse changes in blood cholesterol levels, and reduced rates of lung growth and function.[5]
- Use of smokeless tobacco causes cancers of the mouth, pharynx, and esophagus; gum recession; and an increased risk for heart disease and stroke.[5]
- Smoking cigars increases the risk of oral, laryngeal, esophageal, and lung cancers.[7]

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Nicotine Addiction Among Adolescents

- Several studies have found nicotine to be addictive in ways similar to heroin, cocaine, and alcohol. Because the typical tobacco user receives daily and repeated doses of nicotine, addiction is more common among tobacco users than among other drug users. Of all addictive behaviors, cigarette smoking is the one most likely to become established during adolescence.[5]
- 84% of smokers aged 12–17 consider themselves addicted. The younger people are when they start to smoke cigarettes, the more likely they are to become strongly addicted to nicotine.[5]
- Young people who try to quit smoking suffer the same nicotine withdrawal symptoms as adults who try to quit.[5]
- About 2 out of 3 teenage smokers say they want to quit;[8] 3 out of 4 teenage smokers have made at least one serious attempt to quit smoking;[9] and 70% say that if they could choose again, they would never start smoking.[8]
- Only 5% of high school seniors who smoke daily think they will be smoking in 5 years—but almost 75% of them are still smokers 5 years later.[10]

Tobacco Sales and Promotion to Youth

- All states have laws making it illegal to sell cigarettes to anyone under the age of 18, yet 39% of high school students younger than 18 who smoke say they usually buy cigarettes in a store.[4]
- Among high school students younger than age 18 who smoke, 78% report not being asked for proof of age when they buy cigarettes in a store.[4]
- The tobacco industry generated about $190 million in profit from the illegal sale of cigarettes to minors in 1991. In that year, teenagers smoked an average of 28.3 million cigarettes per day.[11]
- About 86% of adolescent smokers who bought their own cigarettes in 1993 bought Marlboro, Camel, or Newport—the 3 most heavily advertised brands. However, these brands accounted for only 32% of all cigarettes sold that year.[12]
- In a 1991 survey, 30% of 3-year-olds and 91% of 6-year-olds recognized the Joe Camel character (the same recognition level for Mickey Mouse) and linked him to cigarettes.[13]

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Abstinence Based Education

What is Abstinence?

Many people have their own definitions of sexual abstinence. Abstinence means to refrain from sexual contact of any sort, including: genital intercourse, oral sex, anal sex, dry sex (a.k.a. grinding or outercourse), mutual masturbation, or any other physically intimate activity done for the purpose of sexual gratification. Although some of the above types of sexual activity do not result in pregnancy, they are still a form of sex, and some can also transmit disease.

Although some use only sexual behavior to express their affection, sexual expression does not have to include intercourse. Many people have a more expansive view of romance and find that pursuits other than intercourse also give them pleasure and meaning. Walks with someone on the beach, or watching a movie together, are activities many find just as meaningful as sex. A "no" to sexual activity can also be a "yes" to deeper communication and mutual appreciation.

Human nature is such that sexual activity is intimately linked to one's emotional and psychological state. Many find that sexual activity is best when accompanied by the deep commitment of marriage and openness to the possibility of children. Not everyone is ready for this kind of commitment and total self-giving. For this reason, many women and men choose to abstain.[38]

Possible benefits of abstinence:

- Greater respect for self and for each other.
- Security that one is not being pursued for sexual reasons.
- Chance to develop more depth in relationships.
- Fewer worries regarding pregnancy, birth control, and sexually transmitted disease (STDs).

What is the Title V Abstinence Education Program?

In the 1997 Balanced Budget Act, U.S. Federal law, in Title V of the Social Security Act (P.L. 74/271), established rules for abstinence based education programs for schools that receive Maternal and Child Health Block Grants. In this act, Congress authorized $50 million in federal funds annually for five years to be provided to states (in the form of block grants) to promote sexual abstinence in schools. When combined with required state matching funds of $3 for every $4 federal dollars, $437 million is available to support abstinence based education for the duration of the program. Bonuses are provided to the top 5 states that reduce the number of out-of-wedlock births without increasing abortion rates. The abstinence program became effective January of 1998. Schools that receive these grants are required to use a curriculum that includes teaching that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects, and that mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.

Texas Essential Knowledge and Skills for Health Education: Abstinence-Based Education

- According to 19 Texas Administrative Code, § 115.22, Texas Essential Knowledge and Skills for Health Education, recommendations pertaining to abstinence education include:

- Grade 6: The student shall take part in behaviors that decrease health risks throughout their life by explaining the consequences of sexual activity and the benefits of abstinence.
- Grades 7-8: The student understands and uses concepts relating to health promotion and disease prevention throughout their life. The student can demonstrate this understanding by summarizing facts related to Human Immunodeficiency Virus (HIV) infection and sexually transmitted diseases; knowing how to research, access, analyze, and use health information; and discussing the legal implications regarding sexual activity as it relates to minor persons. The student shall also engage in behaviors that reduce health risks throughout their life by identifying information relating to abstinence; analyzing the importance of abstinence from sexual activity as the preferred choice of

behavior in relationship to all sexual activity for unmarried persons of school age; and discussing abstinence from sexual activity as the only method that is 100% effective in preventing pregnancy, sexually transmitted diseases, and the sexual transmission of HIV or acquired immune deficiency syndrome, and the emotional trauma associated with adolescent sexual activity.

- Grades 9-10: The student shall understand how to evaluate health information for appropriateness by discussing the legal implications regarding sexual activity as it relates to minor persons; analyzing the relationship between unsafe behaviors and personal health; developing strategies to promote resiliency throughout their life; analyzing the relationship between the use of refusal skills and the avoidance of unsafe situations such as sexual abstinence; analyzing the importance and benefits of abstinence as it relates to emotional health and the prevention of pregnancy and sexually-transmitted diseases; analyzing the effectiveness and ineffectiveness of barrier protection and other contraceptive methods including the prevention of Sexually Transmitted Diseases (STDs), keeping in mind the effectiveness of remaining abstinent until marriage; analyzing the importance of abstinence from sexual activity as the preferred choice of behavior in relationship to all sexual activity for unmarried persons of school age; and discussing abstinence from sexual activity as the only method that is 100% effective in preventing pregnancy, sexually transmitted diseases, and the sexual transmission of HIV or acquired immune deficiency syndrome, and the emotional trauma associated with adolescent sexual activity.
- Grades 11-12: The student shall exhibit personal/interpersonal skills by analyzing, designing, and evaluating strategies for expressing needs, wants, and emotions in healthy ways. The student is expected to create strategies that promote the advantages of abstinence. The student shall also evaluate communication skills that show consideration and respect for self, family, friends, and others. The student is expected to analyze the importance of abstinence from sexual activity as the preferred choice of behavior in relationship to all sexual activity for unmarried persons of school age and discuss abstinence from sexual activity as the only method that is 100% effective in preventing pregnancy, sexually transmitted diseases, and the sexual transmission of HIV or acquired immune deficiency syndrome, and the emotional trauma associated with adolescent sexual activity.

Section 28.004 of the Texas Education Code (TEC)[39] stipulates that any school instruction in human sexuality includes the following:

- Any course materials and instruction relating to human sexuality, sexually transmitted diseases, or human immunodeficiency virus or acquired immune deficiency syndrome shall be selected by the board of trustees of a school district with the advice of the local health education advisory council, and must present abstinence from sexual activity as the preferred choice of behavior in relationship to all sexual activity for unmarried persons of school age;
- Devote more attention to abstinence from sexual activity than to any other behavior;
- Emphasize that abstinence from sexual activity, if used consistently and correctly, is the only method that is 100 percent effective in preventing pregnancy, sexually transmitted diseases, infection with human immunodeficiency virus or acquired immune deficiency syndrome, and the emotional trauma associated with adolescent sexual activity;
- Direct adolescents to a standard of behavior based in the understanding that abstinence from sexual activity before marriage is the most effective way to prevent pregnancy, sexually transmitted diseases, and infection with human immunodeficiency virus or acquired immune deficiency syndrome; and
- Teach contraception and condom use in terms of human use reality rates instead of theoretical laboratory rates, if instruction on contraception and condoms is included in curriculum content.

In addition:

- A school district may not distribute condoms in connection with instruction relating to human sexuality.
- A school district that provides human sexuality instruction may separate students according to sex for instructional purposes.
- The board of trustees of a school district shall determine the specific content of the district's instruction in human sexuality.
- A change in health curriculum content or instruction may not be made before considering the recommendations of the local health education advisory council.

- A school district shall establish a local health education advisory council to assist the district in ensuring that local community values and health issues are reflected in the district's human sexuality instruction.
- The council's duties include recommending appropriate grade levels for human sexuality instruction; recommending the methods of instruction to be used by a teacher in human sexuality instruction education; and recommending the number of hours of instruction to be provided in health education.
- The council must include persons who represent diverse views in the community about human sexuality instruction; must include parents of students enrolled in the district as a majority of the council; and may include teachers, school administrators, students, health care professionals, members of the business community, law enforcement representatives, senior citizens, clergy, or other interested persons.
- A school district shall notify a parent of each student enrolled in the district of the basic content of the district's human sexuality instruction to be provided to the student; and the parent's right to remove the student from any part of the district's human sexuality instruction.
- A school district shall make all curriculum materials used in the district's human sexuality instruction available for reasonable public inspection.

Lifelong Healthy Eating

School Nutrition Services

Ideally, school nutrition services will provide: 1) an integration of nutritious, affordable, and appealing meals; 2) nutrition education; and 3) an environment that promotes healthy eating behaviors for all children. They should also be designed to maximize each child's education and health potential for a lifetime.[40]

Essential Functions of School Nutrition Services

Health is Academic: A Guide to Coordinated School Health Programs, states that the essential functions of school nutrition programs are to provide:

- Access to a variety of nutritious, culturally appropriate foods, that promote growth and development, pleasure in healthy eating, and

long-term health, as well as to prevent school day hunger and its consequent ill effects on attention and learning of tasks.

- Nutrition education that empowers the student to select and enjoy healthy food and physical activity

- Screening, assessment, counseling, and referral for nutrition problems and the provision of modified meals for students with special needs[41]

It is the position of the National Association of School Nurses that school breakfast and lunch programs, as recommended by the American Dietetic Association, should be available to those students with economic needs. Research has shown a direct correlation between hunger and poor school performance. The School Breakfast Program and the School Lunch Program provide nutritious meals and have been shown to be effective in providing a safety net for children by decreasing their hunger and therefore increasing their readiness to learn.[42]

The Centers for Disease Control and Prevention's (CDC) *Guidelines for School Health Programs to Promote Lifelong Healthy Eating* are a helpful resource and guide in improving the eating behaviors of young people. Implementing these recommendations may help in increasing students' potential for learning and good health.[43]

These guidelines regarding school health programs have been printed and included in the following pages. The complete report is available online at http://www.cdc.gov/nccdphp/dash/nutguide.htm.

CDC's Guidelines for School Health Programs

Promoting Lifelong Healthy Eating

An Overview

Most young people in the United States make poor eating choices that put them at risk for health problems. Establishing healthy eating habits at a young age is critical because changing poor eating patterns in adulthood is difficult. Schools can help young people improve their eating habits by implementing effective policies and educational programs.

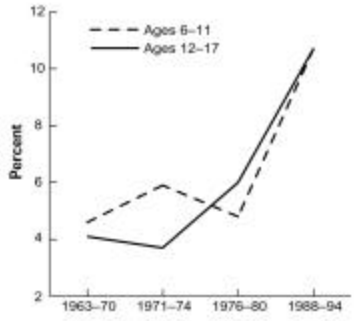
Benefits of Healthy Eating

- Helps young people grow, develop, and do well in school.
- Prevents childhood and adolescent health problems such as obesity, eating disorders, dental caries, and iron deficiency anemia.
- May help prevent health problems later in life, including heart disease, cancer, and stroke—the three leading causes of death.

Consequences of Unhealthy Eating

- Hungry children are more likely to have behavioral, emotional, and academic problems at school.
- Research suggests that not having breakfast can affect children's intellectual performance.
- Poor eating habits and inactivity are the root causes of overweight and obesity. The percentage of young people who are overweight has almost doubled in the past 20 years.
- Eating disorders such as anorexia and bulimia—which can cause severe health problems and even death—are increasingly common among young people.
- Poor diet and inactivity cause at least 300,000 deaths among U.S. adults each year.

Percentage of Young People Who Are Overweight*

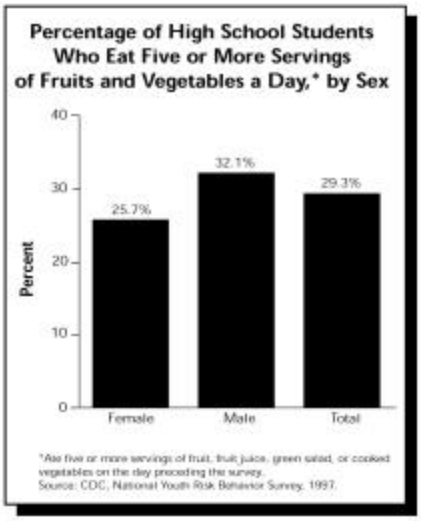


*Overweight defined by the age- and sex-specific 95th percentile of body mass index (1963–70 data).
Source: Troiano RP, Flegal KM. *Pediatrics* 1998;101(3):497–504.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
February 2000

Eating Habits of the Nation's Youth

- More than 84% of young people eat too much fat, and more than 91% eat too much saturated fat.
- Only one in five young people eats the recommended five daily servings of fruits and vegetables. Fifty-one percent of children and adolescents eat less than one serving a day of fruit, and 29% eat less than one serving a day of vegetables that are not fried.
- The average calcium intake of adolescent girls is about 800 mg a day, considerably less than the Recommended Dietary Allowance for adolescents of 1,200 mg of calcium a day.
- One in five students aged 15–18 regularly skips breakfast.
- Thirteen percent of high school girls vomit, take laxatives, or take diet pills to lose or keep from gaining weight. Harmful weight-loss practices have been reported among girls as young as 9 years old.



The Opportunity

Schools are ideally suited to give children and adolescents the skills and support they need to adopt healthy eating behaviors for life.

- More than 95% of all children and adolescents aged 5–17 are enrolled in school.
- Schools can offer many opportunities for young people to practice healthy eating.
- Teachers and food service personnel can contribute their expertise.

What is healthy eating?

Dietary Guidelines for Americans, produced by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services, gives the following advice:

- Eat a variety of foods.
- Balance the food you eat with physical activity.
- Eat plenty of grain products, vegetables, and fruits.
- Choose a diet that is
  - Low in fat, saturated fat, and cholesterol.
  - Moderate in sugars, salt, and sodium.

Promoting Lifelong Healthy Eating Among Young People

How You Can Help

Everyone can make a difference in young people's lives by helping them learn how to adopt healthy eating habits. If you are a parent or guardian, student, teacher, school administrator or board member, food service staff member, athletic coach, community nutritionist, health care provider, or anyone else who cares about the health of young people, here are some steps you can take.

Everyone Can

- ✔ Set a good example by eating a balanced diet high in fruits, vegetables, and whole grains.
- ✔ Find out what schools are doing to promote healthy eating.
- ✔ Join a school health or nutrition advisory council and guide nutrition policy.
- ✔ Provide positive suggestions to food service managers.
- ✔ Join students for school lunch.
- ✔ Encourage schools to offer and students to participate in the School Breakfast Program.
- ✔ Speak to school administrators and school boards about the importance of effective nutrition policies and programs.
- ✔ Urge parent associations and school clubs to sell healthy foods or nonfood items for fund-raising activities.

Parents or Guardians Can

- ✔ Provide healthy snacks for school parties and special events.
- ✔ Help school staff plan activities where students can sample healthy foods.
- ✔ Involve children in selecting and preparing food.
- ✔ Offer children a variety of healthy foods, keep healthy snacks on hand, and make mealtime an enjoyable experience.
- ✔ Share nutrition information with children and talk with them about nutrition projects and homework assignments.

Students Can

- ✔ Set goals for healthy eating habits and monitor progress.
- ✔ Make healthy choices in the school cafeteria or when packing lunch.
- ✔ Ask for healthy snacks.
- ✔ Encourage friends and family members to eat healthy foods and be physically active.
- ✔ Use nutrition labels to select low-fat snacks.
- ✔ Urge the student council to request healthy food choices in school and at school events.
- ✔ Take elective courses in health, nutrition, cooking, and physical education.
- ✔ Help plan school and family menus.

Teachers Can

- ✔ Develop a comprehensive scope and sequence for nutrition education.
- ✔ Choose curricula that meet the criteria set out in the CDC guidelines.
- ✔ Work with food service managers, coaches, physical education teachers, and other staff to coordinate nutrition education efforts and give students consistent messages about healthy eating.
- ✔ Request healthy snacks for class parties.
- ✔ Avoid using food to reward students.
- ✔ Take part in nutrition training sessions and share experiences with other teachers.
- ✔ Find and use resources for nutrition education.
- ✔ Involve families and community organizations in nutrition education activities.

School Food Service Staff Can

- ✔ Provide meals that are tasty and appealing to students and that meet USDA nutrition standards and the Dietary Guidelines for Americans.
- ✔ Support classroom lessons by offering foods that illustrate key messages, decorating the cafeteria with educational posters, and posting the nutritional content of foods served.
- ✔ Coordinate activities with classroom and physical education teachers and other staff.
- ✔ Involve students and families in planning school menus.
- ✔ Offer meals that reflect the cultural diversity and preferences of students.
- ✔ Take part in training sessions on nutrition education and on marketing school meals.
- ✔ Invite parents to lunch and give them information about the nutritional value of the meal.

School Administrators and School Board Members Can

- ✔ Organize a school health or nutrition advisory committee that includes all key groups.
- ✔ Make sure students have enough time to eat in a safe and comfortable dining area.
- ✔ Stock vending machines with 100% fruit juice and other healthy snacks; make sure that healthy foods are served at school meetings and events.
- ✔ Prohibit the sale of high-fat, high-sugar snacks during mealtimes and as fund-raisers.
- ✔ Allocate adequate time for nutrition education as part of a sequential, comprehensive health education program.
- ✔ Hire teachers and food service managers with appropriate training and support ongoing in-service training.
- ✔ Bring classroom and physical education teachers, food service managers, and other staff together as a team.
- ✔ Evaluate school nutrition programs.

For more information about what schools can do to promote healthy eating among young people, please see CDC's *Guidelines for School Health Programs to Promote Lifelong Healthy Eating*. The guidelines are available on the Internet at http://www.cdc.gov/nccdphp/dash/nutguide.htm. Print copies are available from CDC, Division of Adolescent and School Health, ATTN: Resource Room, 4770 Buford Highway, NE, Mailstop K-32, Atlanta, GA 30341-3717; e-mail: ccdinfo@cdc.gov; phone: (770) 488-3168; fax: 888-282-7681.

February 2000

CDC's Guidelines for Schools to Promote Lifelong Healthy Eating

In collaboration with experts from universities, state and federal agencies, voluntary organizations, and professional associations, CDC has developed guidelines to help schools implement effective nutrition policies and educational programs. *Guidelines for School Health Programs to Promote Lifelong Healthy Eating* is based on an extensive review of research and practice.

Key Principles

The CDC guidelines state that school-based nutrition education programs are most likely to be effective when they

- Help young people learn skills (not just facts).
- Give students repeated chances to practice healthy eating.
- Make nutrition education activities fun.
- Involve teachers, administrators, families, community leaders, and students in delivering strong, consistent messages about healthy eating as part of a coordinated school health program.

Recommendations

The guidelines include seven recommendations for ensuring a quality school program to promote lifelong healthy eating.

1 Policy

Seek input from all members of the school community to develop a coordinated school nutrition policy that promotes healthy eating through classroom lessons and a supportive school environment. The policy should commit the school to

- Provide adequate time for nutrition education.
- Offer healthy, appealing foods (such as fruits, vegetables, and low-fat grain products) wherever food is available and discourage the availability of foods high in fat, sodium, and added sugars (such as soda, candy, and fried chips) on school grounds and as part of fund-raising activities.
- Discourage teachers from using food to discipline or reward students.
- Provide adequate time and space for students to eat meals in a pleasant, safe environment.
- Establish links with professionals who can provide counseling for nutritional problems, refer families to nutrition services, and plan health promotion activities for staff.

2 Curriculum

As part of a sequential, comprehensive health education curriculum that begins in preschool and continues through secondary school, implement nutrition education designed to help students adopt healthy eating behaviors. Such education should

- Help students learn specific nutrition-related skills, such as how to plan a healthy meal and compare food labels.
- Ensure that students also learn general health skills, such as how to assess their health habits, set goals for improvement, and resist social pressures to make unhealthy eating choices.

3 Instruction

Provide nutrition education through activities that are fun, participatory, developmentally appropriate, and culturally relevant. These activities should

- Emphasize the positive, appealing aspects of healthy eating rather than the harmful effects of unhealthy eating.
- Present the benefits of healthy eating in the context of what is already important to students.
- Give students many chances to taste foods low in fat, sodium, and added sugars and high in vitamins, minerals, and fiber.

4 Program Coordination

Coordinate school food service with nutrition education and with other components of the school health program to reinforce messages about healthy eating.

5 Staff Training

Provide staff who are involved in nutrition education with adequate preservice and ongoing in-service training that focuses on teaching strategies for promoting healthy behaviors.

6 Family & Community Involvement

Involve family members and the community in supporting and reinforcing nutrition education.

7 Evaluation

Regularly evaluate the program's effectiveness in promoting healthy eating and make changes as appropriate.

Nutrition and the Health of Young People

Fact Sheet

Diet and Disease

- Diet and physical activity patterns together account for at least 300,000 deaths among adults in the United States each year; only tobacco use contributes to more deaths.[1]
- Diet is a known risk factor for the three leading causes of death—heart disease, cancer, and stroke—as well as for diabetes, high blood pressure, and osteoporosis.[2]
- Researchers have estimated that dietary changes could prevent as many as 35% of cancer deaths.[3]
- The annual economic costs to the nation from heart disease and cancer alone exceed $150 billion.[4,5]
- Early indicators of atherosclerosis, the most common cause of heart disease, often begin in childhood and adolescence and are related to young people's blood cholesterol levels, which are affected by diet.[6]

Diet and Academic Performance

- Research suggests that not having breakfast can affect children's intellectual performance.[7]
- Even moderate undernutrition can have lasting effects on children's cognitive development and school performance.[8]
- Participation in the School Breakfast Program can improve students' standardized test scores and reduce their rates of absence and tardiness.[9]

Overweight and Obesity

- The percentage of children and adolescents who are overweight has more than doubled in the past 30 years; most of the increase has occurred since the late 1970s.[10,11]
- Of U.S. young people aged 6–17 years, about 5.3 million, or 12.5%, are seriously overweight.[11,12]
- Obese children and adolescents are more likely to become obese adults.[13] Overweight adults are at increased risk for heart disease, high blood pressure, stroke, diabetes, some types of cancer, and gallbladder disease.[2]

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
June 1997

Eating Behaviors of Young People

- More than 84% of children and adolescents eat too much total fat (i.e., more than 30% of calories from fat), and more than 91% eat too much saturated fat (i.e., more than 10% of calories from saturated fat).[14] On average, young people get 33%–34% of their calories from total fat and 12%–13% of their calories from saturated fat.[15,16]

- Children and adolescents eat, on average, only 3.6 servings of fruits and vegetables a day, and fried potatoes account for a large proportion of the vegetables eaten. Only one in five children eats five servings of fruits and vegetables a day, as recommended by the National Cancer Institute. Fifty-one percent of children and adolescents eat less than one serving of fruit a day, and 29% eat less than one serving a day of vegetables that are not fried.[17]

- The average calcium intake of adolescent girls is about 800 mg a day; the Recommended Dietary Allowance for adolescents is 1,200 mg of calcium a day.[18]

- Eight percent of high school girls take laxatives or vomit to lose weight or keep from gaining weight, and 9% take diet pills.[19] Harmful weight-loss practices have been reported among girls as young as 9 years old.[20]

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Physical Education

CDC's Guidelines for School and Community Programs Promoting Lifelong Physical Activity[44]

Young people can build healthy bodies and establish healthy lifestyles by including physical activity in their daily lives. Many young people are not physically active on a regular basis, and physical activity declines dramatically during adolescence. School and community programs can help young people get active and stay active.

Benefits of Physical Activity

Regular physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weight, reduces anxiety and stress, increases self-esteem, and may improve blood pressure and cholesterol levels. Young people say they like physical activity because it is fun. They do it with friends. It helps them learn skills, stay in shape, and look better.

Consequences of Physical Inactivity

The percentage of young people who are overweight has almost doubled in the past 20 years. Inactivity and poor diet cause at least 300,000 deaths a year in the United States. Only tobacco use causes more preventable deaths.

Adults who are less active are at greater risk of dying of heart disease and developing diabetes, colon cancer, and high blood pressure.

Physical Activity Among Young People

65% of high school students participate in vigorous physical activity 3 or more days a week, and 27% participate in moderate physical activity 5 or more days a week. 73% of 9th graders, but only 61% of 12th graders, participate in vigorous physical activity on a regular basis.

56% of high school students are enrolled in a physical education class; daily participation in physical education classes by high school students dropped from 42% in 1991 to 29% in 1999. Male high school students are significantly more likely than female students to regularly participate in vigorous physical activity (72% vs. 57%) and in moderate physical activity (29% vs. 24%), and to participate in team sports (62% vs. 49%).

How Much Physical Activity Do Young People Need?

Everyone can benefit from a moderate amount of physical activity on most, if not all, days of the week. Young people should select activities they enjoy that fit into their daily lives. Examples of moderate activity include:

- Walking 2 miles in 30 minutes or running 1½ miles in 15 minutes.
- Bicycling 5 miles in 30 minutes or 4 miles in 15 minutes.
- Dancing fast for 30 minutes or jumping rope for 15 minutes.
- Playing basketball for 15–20 minutes or volleyball for 45 minutes.

Increasing the frequency, time, or intensity of physical activity can bring even more health benefits. Too much physical activity, however, can lead to overuse injuries and other health problems.

Key Principles

The guidelines state that physical activity programs for young people are most likely to be effective when they:

- Emphasize enjoyable participation in physical activities that are easily done throughout life;
- Offer a diverse range of noncompetitive and competitive activities appropriate for different ages and abilities;
- Give young people the skills and confidence they need to be physically active; and
- Promote physical activity through all components of a coordinated school health program and develop links between school and community programs.

Recommendations

The CDC guidelines include 10 recommendations for ensuring quality physical activity programs.

1. Policy

- Establish policies that promote enjoyable, lifelong physical activity.
- Schools should require daily physical education and comprehensive health education (including lessons on physical activity) in grades K-12.
- Schools and community organizations should provide adequate funding, equipment, and supervision for programs that meet the needs and interests of all students.

2. Environment

- Provide physical and social environments that encourage and enable young people to engage in safe and enjoyable activity.
- Provide access to safe spaces and facilities and implement measures to prevent activity-related injuries and illnesses.
- Provide school time, such as recess, for unstructured physical activity, such as jumping rope.
- Discourage the use or withholding of physical activity as punishment.
- Provide health promotion programs for school faculty and staff (See Chapter 13 of this manual).

3. Physical Education Curricula and Instruction

- Implement sequential physical education curricula and instruction in grades K-12 that emphasize enjoyable participation in lifetime physical activities such as walking and dancing, not just competitive sports.
- Help students develop the knowledge, attitudes, and skills they need to adopt and maintain a physically active lifestyle.
- Follow the national standards for physical education.
- Keep students active for most of class time.

4. Health Education Curricula and Instruction

- Implement health education curricula and instruction that feature active learning strategies and follow the National Health Education Standards.
- Help students develop the knowledge, attitudes, and skills they need to adopt and maintain a healthy lifestyle.

5. Extracurricular Activities

- Provide extracurricular physical activity programs that offer diverse, developmentally appropriate activities--both noncompetitive and competitive--for all students.

6. Family Involvement

- Encourage parents and guardians to support their children's participation in physical activity, to be physically active role models, and to include physical activity in family events.

7. Training

- Provide training to enable teachers, coaches, recreation and healthcare staff, and other school and community personnel to promote enjoyable, lifelong physical activity among young people.

8. Health Services

- Assess the physical activity patterns of young people, refer them to appropriate physical activity programs, and advocate for physical activity instruction and programs for young people.

9. Community Programs

- Provide a range of developmentally appropriate community sports and recreation programs that are attractive to all young people.

10. Evaluation

- Regularly evaluate physical activity instruction, programs, and facilities.

These guidelines were developed by the Centers for Disease Control and Prevention, Division of Adolescence and School Health. Copies of these guidelines are available online at http://www.cdc.gov/nccdphp/dash/physact.htm.

Print copies are available from:

CDC, Division of Adolescent and School Health
ATTN: Resource Room,
4770 Buford Highway, NE,
Mailstop K-32,
Atlanta, GA 3034103717

E-mail: cdcinfo@cdc.gov
Telephone: (770)488-3168
Fax: (888)282-7681

A more detailed version of these guidelines are available at:
www.cdc.gov/mmwr/preview/mmwrhtml/0046823.htm

How You Can Help[45]

Everyone can make a difference in young people's lives by helping them include physical activity in their daily routines. If you are a parent, guardian, student, teacher, school nurse, athletic coach, school administrator or board member, community sports and recreation program coordinator, or anyone else who cares about the health of young people, the following discussion offers ideas for steps you can take.

Everyone Can

Advocate for convenient, safe, and adequate places for young people to play and take part in physical activity programs. Encourage school administrators and board members to support daily physical education and other school programs that promote lifelong physical activity, not just competitive sports. Set a good example by being physically active, make healthy eating choices, and not smoking. Tell young people about sports and recreation programs in their community. Discourage the use of physical activity as a punishment.

Parents or Guardians Can

Encourage your children to be physically active. Learn what your children want from physical activity programs and help them choose appropriate activities. Volunteer to help your children's sports teams and recreation programs. Play and be physically active with your children. Teach your children safety rules and make sure that they have the clothing and equipment needed to participate safely in physical activity.

Students Can

Set goals for increasing your physical activity and monitor your progress. Encourage friends and family members to be physically active. Use protective clothing and proper equipment to prevent injuries and illnesses. Encourage the student council to advocate for physical education classes and after-school programs that are attractive to all students. Take elective courses in health and physical education.

Teachers and Coaches Can

Use curricula that follow CDC's *Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People*, as well as national standards for physical education and health education. Keep students moving during physical education class. Ensure that young people know safety rules and use appropriate protective clothing and equipment. Emphasize activity and enjoyment over competition. Help students become competent in many motor and behavioral skills. Involve families and community organizations in physical activity programs. Refrain from using physical activity, such as doing push-ups or running laps, as punishment.

School Administrators and Board Members Can

Require health education and daily physical education for students in grades K–12. Ensure that physical education and extracurricular programs offer lifelong activities, such

as walking and dancing. Provide time during the day, such as recess, for unstructured physical activity, such as walking or jumping rope. Hire physical activity specialists and qualified coaches. Ensure that school facilities are clean, safe, and open to students during non-school hours and vacations. Provide health promotion programs for faculty and staff. Provide teachers with in-service training in physical activity promotion.

Community Sports and Recreation Program Coordinators Can

Provide a mix of competitive team sports and noncompetitive, lifelong fitness and recreation activities. Increase the availability of parks, public swimming pools, hiking and biking trails, and other places for physical activity. Ensure that physical facilities meet or exceed safety standards. Ensure that coaches have appropriate coaching competencies. Work with schools, businesses, and community groups to ensure that low-income young people have transportation and appropriate equipment for physical activity programs.

Skills To Target Each Year (Grade School, Middle School, High School):

Kindergarten[46]

These students should be learning fundamental movement skills and begin to understand how the muscles, bones, heart, and lungs function in relation to physical activity. A vocabulary for movement develops and concepts are applied to space and body awareness. The children should view physical activity as challenging and enjoyable. Examples of skills to include at this age include:

- Tossing a ball and catching it before it bounces twice;
- Walking forward and sideways the length of a beam without falling;
- Demonstrating the ability to play within boundaries during games and activities;
- Sharing equipment and space with others.

Grade 1[47]

First grade students continue to develop basic body control, fundamental movement skills, and health-related fitness components such as strength, endurance, and flexibility.

Students continue to learn rules and procedures for simple games and apply safety practices. Examples of skills to include at this age are:

- Demonstrating proper foot patterns in hopping, jumping, skipping, leaping, galloping, and sliding;
- Clapping in time to rhythmic beat;
- Describing location and function of the heart.

Grade 2[48]

Students acquire the knowledge and skills for movement that provide the foundation for enjoyment, continued social development through physical activity, and access to a physically active lifestyle, and understand the relationship between physical activity and health throughout the lifespan. Skills to include are:

- Demonstrating the ability to mirror a partner;
- Demonstrating situations such as under, over, behind, next to, through, right, left, up, or down.
- Displaying good sportsmanship.

Grade 3[49]

Students acquire the knowledge and skills for movement that provide the foundation for enjoyment, continued social development through physical activity, and access to a physically active lifestyle and understand the relationship between physical activity and health throughout the lifespan. Skills to include are:

- Demonstrating the mature form of jogging, running, and leaping;
- Demonstrating proper body alignment in lifting, carrying, pushing, and pulling;
- Distinguishing between anaerobic and aerobic activity.

Grade 4[50]

Fourth grade students learn to identify the components of health-related fitness. Students combine locomotor and manipulative skills in dynamic situations with body control. Students begin to identify sources of health/fitness information and continue to learn about appropriate clothing and safety precautions in exercise settings. Skills to include are:

- Transferring weight along and over equipment with good body control;
- Identifying opportunities for participation in physical activity in the community such as little leagues and parks and recreation.

Grade 5[51]

Basic skills such as jumping rope, moving to a beat, and catching and throwing should have been mastered in previous years and can now be used in game-like situations. Students continue to assume responsibility for their own safety and the safety of others. Students continue to learn the etiquette of participation and resolve conflicts during games. Skills to include at this age are:

- Performing selected folk dances;
- Self-monitoring the heart rate during exercise.

Grades 6-8 (Middle School)[52]

Students understand in greater detail the functions of the body, learn to measure their own performance more accurately, and develop plans for improvement. They learn to use technology such as heartrate monitors to assist in measuring and monitoring their own performance. Identifying the types of activities that provide them with enjoyment and challenge and that will encourage them to be physically active throughout life is reinforced during instruction in these grades. Skills that should be included for **grade 6** students are:

- Throwing objects with accuracy and distance such as a frisbee, softball, and basketball;
- Designing and refining a jump rope routine to music;
- Keeping accurate score during a contest.

Skills to include for grade 7 students include[53]

- Coordinating movements with teammates to achieve team goals;
- Identifying favorite lifelong activities.

Skills to include for grade 8 students include[54]

- Identifying proteins, fats, carbohydrates, water, vitamins, and minerals as key elements found in foods that are necessary for optimum body function;
- Analyzing exercises for their effects on the body such as beneficial or potentially dangerous.

High School[55]

The basic purpose of this course is to motivate students to strive for lifetime personal fitness with an emphasis on the health-related components of physical fitness. The knowledge and skills taught in this course include teaching students about the process of becoming fit as well as achieving some degree of fitness within the class. The concept of wellness, or striving to reach optimal levels of health, is the cornerstone of this course and is exemplified by one of the course objectives—students designing their own personal fitness program.

- Identifying and applying basic weight training, principles and safety practices such as appropriate goals, appropriate weight and repetitions, body alignment, principles of frequency, intensity and time, and importance of balance in muscle pairs;
- Including warm-up and cool-down procedures regularly during exercise; monitoring potentially dangerous environmental conditions such as wind, cold, heat, and insects, and recommending prevention and treatment.

CDC's Guidelines for Promoting Lifelong Physical Activity

CDC's Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People *were developed in collaboration with experts from other federal agencies, state agencies, universities, voluntary organizations, and professional associations. They are based on an extensive review of research and practice.*

Key Principles

The guidelines state that physical activity programs for young people are most likely to be effective when they

- Emphasize enjoyable participation in physical activities that are easily done throughout life.
- Offer a diverse range of noncompetitive and competitive activities appropriate for different ages and abilities.
- Give young people the skills and confidence they need to be physically active.
- Promote physical activity through all components of a coordinated school health program and develop links between school and community programs.

Recommendations

The guidelines include 10 recommendations for ensuring quality physical activity programs.

1 Policy

Establish policies that promote enjoyable, lifelong physical activity.

- Schools should require daily physical education and comprehensive health education (including lessons on physical activity) in grades K–12.
- Schools and community organizations should provide adequate funding, equipment, and supervision for programs that meet the needs and interests of all students.

2 Environment

Provide physical and social environments that encourage and enable young people to engage in safe and enjoyable physical activity.

- Provide access to safe spaces and facilities and implement measures to prevent activity-related injuries and illnesses.
- Provide school time, such as recess, for unstructured physical activity, such as jumping rope.
- Discourage the use or withholding of physical activity as punishment.
- Provide health promotion programs for school faculty and staff.

j

3 Physical Education Curricula and Instruction

Implement sequential physical education curricula and instruction in grades K–12 that

- Emphasize enjoyable participation in lifetime physical activities such as walking and dancing, not just competitive sports.
- Help students develop the knowledge, attitudes, and skills they need to adopt and maintain a physically active lifestyle.
- Follow the National Standards for Physical Education.
- Keep students active for most of class time.

4 Health Education Curricula and Instruction

Implement health education curricula that

- Feature active learning strategies and follow the National Health Education Standards.
- Help students develop the knowledge, attitudes, and skills they need to adopt and maintain a healthy lifestyle.

5 Extracurricular Activities

Provide extracurricular physical activity programs that offer diverse, developmentally appropriate activities—both noncompetitive and competitive—for all students.

6 Family Involvement

Encourage parents and guardians to support their children's participation in physical activity, to be physically active role models, and to include physical activity in family events.

7 Training

Provide training to enable teachers, coaches, recreation and health care staff, and other school and community personnel to promote enjoyable, lifelong physical activity to young people.

8 Health Services

Assess the physical activity patterns of young people, refer them to appropriate physical activity programs, and advocate for physical activity instruction and programs for young people.

9 Community Programs

Provide a range of developmentally appropriate community sports and recreation programs that are attractive to all young people.

10 Evaluation

Regularly evaluate physical activity instruction, programs, and facilities.

PHYSICAL ACTIVITY INFORMATION RESOURCE LIST

Information on how to promote safe and enjoyable physical activity among young people is availab from government agencies, professional organizations, and voluntary organizations. On the state ar local levels, this information is available from

- Affiliates of voluntary health organizations (e.g., the American Heart Association).
- State and local health departments.
- Governor's councils on physical fitness and sports.
- State associations for health, physical education, recreation, and dance.
- Organizations that serve young people (e.g., the Young Women's Christian Association).

On the national level, information is available from the following agencies and organizations:

American Alliance for Health, Physical Education, Recreation, and Dance
1900 Association Drive
Reston, VA 20191-1599
(800) 213-7193
http://www.aahperd.org

American Cancer Society
1599 Clifton Road, NE
Atlanta, GA 30329-4251
(800) 227-2345
http://www.cancer.org

American College of Sports Medicine
P.O. Box 1440
Indianapolis, IN 46206-1440
(317) 637-9200
http://www.acsm.org

American Heart Association
7272 Greenville Avenue
Dallas, TX 75231-4596
(800) 242-8721
http://www.amhrt.org

American School Health Association
PO Box 708
Kent, OH 44240-0708
(330) 678-1601
http://www.ashaweb.org

National Association for Sport and Physical Education
1900 Association Drive
Reston, VA 20191-1599
(800) 213-7193, ext 410
http://www.aahperd.org/naspe.html

National Association of Governor's Councils on Physical Fitness and Sports
201 South Capitol Avenue, Suite 560
Indianapolis, IN 46225
(317) 237-5630
http://www.fitnesslink.com/Govcouncil

Division of Adolescent and School Health
Resource Room
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention
4770 Buford Highway, NE, MS K–32
Atlanta, GA 30341-3724
(888) CDC-4NRG
http://www.cdc.gov/nccdphp/dash

National Heart, Lung, and Blood Institute
Information Center
PO Box 30105
Bethesda, MD 20824-0105
(301) 251-1222
http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm

National Recreation and Park Association
2775 South Quincy Street, Suite 300
Arlington, VA 22206-2204
(800) 649-3042, (703) 578-5558
http://www.nrpa.org

President's Council on Physical Fitness and Sports
200 Independence Ave., SW, Room 738H
Washington, DC 20201
(202) 690-9000
http://www.dhhs.gov/progorg/ophs
http://www.indiana.edu/~preschal

June 1997

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
PUBLIC HEALTH SERVICE

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Physical Activity and the Health of Young People

Fact Sheet

Benefits of Regular Physical Activity

- Helps build and maintain healthy bones and muscles[1]
- Helps control weight, build lean muscle, and reduce fat[1]
- Reduces feelings of depression and anxiety and promotes psychological well-being[1]

Long-Term Consequences of Physical Inactivity

- Physical inactivity and poor diet together account for at least 300,000 deaths in the United States each year. Only tobacco use contributes to more preventable deaths.[2]
- Physical inactivity increases the risk of dying prematurely, dying of heart disease, and developing diabetes, colon cancer, and high blood pressure.[1]

Overweight and Obesity

- The percentage of children and adolescents who are overweight has more than doubled in the past 30 years; most of this increase has occurred since the late 1970s.[3]
- Of U.S. children and adolescents aged 6–17 years, about 4.7 million, or 11%, are seriously overweight.[3]
- Obese children and adolescents are more likely to become obese adults;[4,5] overweight adults are at increased risk for heart disease, high blood pressure, stroke, diabetes, some types of cancer, and gallbladder disease.[6]

Participation in Physical Activity by Young People

- Nearly half of young people aged 12–21 do not engage in vigorous physical activity on a regular basis.[7]
- Participation in all types of physical activity declines strikingly as children and adolescents get older. For example:
  - Regular participation in vigorous physical activity has been reported by 69% of young people aged 12–13 but only 38% of those aged 18–21.[7]
  - Seventy-two percent of 9th graders participate in vigorous physical activity on a regular basis, compared with only 55% of 12th graders.[8]

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
March 1997

Physical Activity Among Young People in the United States

Type of Activity	1992 National Household-Based Survey of Youths Aged 12–21[7]	1995 National School-Based Survey of Students in Grades 9–12[8]
Regular vigorous physical activity[a]	54%	64%
Almost daily light to moderate activity[b]	26%	21%
Regular strengthening/toning activities[c]	46%	50%
Regular stretching activities[d]	48%	53%

[a]Participation in activities that made them sweat and breathe hard for at least 20 minutes on at least 3 of the 7 preceding days.
[b]Walking or bicycling for 30 minutes or more on at least 5 of the 7 preceding days.
[c]Participation in activities such as push-ups, sit-ups, and weightlifting on at least 3 of the 7 preceding days.
[d]Participation in activities such as toe touching, knee bending, and leg stretching on at least 3 of the 7 preceding days.

Participation in Physical Education Classes

- Forty percent of U.S. high school students are not enrolled in a physical education class; 19% of 9th graders and 58% of 12th graders are not enrolled.[8]
- The percentage of students who did not attend a daily physical education class rose from 58% in 1991 to 75% in 1995;[8,9] in 1995, 59% of 9th graders and 87% of 12th graders did not attend a daily physical education class.[8]
- In 1991, 19% of students enrolled in a physical education class reported that they did not exercise for 20 or more minutes in an average physical education class; this figure rose to 30% in 1995.[8,9]
- Only 19% of all high school students are physically active for at least 20 minutes in a daily physical education class.[8]

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9. Centers for Disease Control and Prevention. Participation in school physical education and selected dietary patterns among high school students—United States, 1991. *Morbidity and Mortality Weekly Report* 1992;41:597–601,607.

Physical Activity and the Health of Young People

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PREPARTICIPATION PHYSICAL EVALUATION -- MEDICAL HISTORY

This **MEDICAL HISTORY FORM** must be completed ***annually*** by parent (or guardian) and student in order for the student to participate in athletic activities. These questions are designed to determine if the student has developed any condition which would make it hazardous to participate in an athletic event.

Student's Name: _____ Sex_____ Age_____ Date of Birth_____

Address_____ Phone_____

Grade _____ School_____

Personal Physician _____ Phone_____

In case of emergency, contact:

Name _____ Relationship_____ Phone (H) _____ (W)_____

Explain "Yes" answers below. Circle questions you don't know the answers to. ***Any Yes answer to questions 1, 2, 7, 11, or 17 requires completion of the Preparticipation Physical Evaluation Form on the reverse side.***

		Yes	No
1.	Have you had a medical illness or injury since your last check up or sports physical?	❑	❑
2.	Have you ever been hospitalized overnight?	❑	❑
	Have you ever had surgery?	❑	❑
3.	Are you currently taking any prescription or non prescription (over-the-counter) medication or pills or using an inhaler?	❑	❑
4.	Do you have any allergies (for example, to pollen, medicine, food, or stinging insects)?	❑	❑
5.	Hae you ever passed out during or after exercise?	❑	❑
	Have you ever been dizzy during or after exercise?	❑	❑
	Have you ever had chest pain during or after exercise?	❑	❑
	Do you get tired more quickly than you friends do during exercise?	❑	❑
	Have you ever had racing of your heart or skipped heartbeats?	❑	❑
	Have you had high blood pressure or high cholesterol?	❑	❑
	Have you ever been told you have a heart murmur?	❑	❑
	Has any family member or relative died of heart problems or of sudden death before age 50?	❑	❑
	Have you had a severe viral infection (for example, myocarditis or mononucleosis) within the last month?	❑	❑
	Has a physician ever denied or restricted your participation in sports for any heart problems?	❑	❑
6.	Do you have any current skin problems (for example, itching, rashes, acene, warts, fungus, or blisters)?	❑	❑
7.	Have you ever had a head injury or concussion?	❑	❑
	Have you ever been knocked out, become unconscious, or lost your memory?	❑	❑
	Have you ever had a seizure?	❑	❑
	Do you have frequent or severe headaches?	❑	❑
	Have you ever had numbness or tingling in your arms, hands, legs, or feet?	❑	❑
	Have you ever had a stinger, burner, or pinched nerve?	❑	❑
8.	Have you ever become ill from exercising in the heat?	❑	❑
9.	Do you cough, wheeze, or have trouble breathing during or after activity?	❑	❑
	Do you have asthma?	❑	❑
	Do you have seasonal allergies that require medical treatment?	❑	❑
10.	Have you had any problems with your eyes or vision?	❑	❑
11.	Are you missing any paired organs?	❑	❑

		Yes	No
12.	Do you use any special protective or corrective equipment or devices that aren't usually used for your sport or position (for example, knee brace, special neck roll, foot orthotics, retainer on your teeth, hearing aid)?	❑	❑
13.	Have you ever had a sprain, strain, or swelling after injury?	❑	❑
	Have you broken or fractured any bones or dislocated any joints?	❑	❑
	Have you had any other problems with pain or swelling in muscles, tendons, bones, or joints?	❑	❑

If yes, check appropriate box and explain below.

❑ Head	❑ Elbow	❑ Hip
❑ Neck	❑ Forearm	❑ Thigh
❑ Back	❑ Wrist	❑ Knee
❑ Chest	❑ Hand	❑ Shin/Calf
❑ Shoulder	❑ Finger	❑ Ankle
❑ Upper Arm		Foot

		Yes	No
14.	Do you want to weigh more or less than you do now?	❑	❑
	Do you lose weight regularly to meet weight requirements for your sport?	❑	❑
15.	Do you feel stressed out?	❑	❑
16.	Record the dates of your most recent immunications (shots) for:	❑	❑

Tetanus _____ Measles _____

Hepatitis B _____ Chickenpos _____

17.	Are you under a doctors care?	❑	❑

Females Only

18.	When was your first menstrual period?	❑	❑
	When was your most recent menstrual period?	❑	❑
	How much time do you usually have from the start of one period to the start of another?	❑	❑
	How many periods have you had in the last year?	❑	❑
	What was the longest time between periods in the last year?	❑	❑

Explain "Yes" answers here:

It is understood that even though protective equipment is worn by the athlete, whenever needed, the possibility of an accident still remains. Neither the University Interscholastic League nor the high school assumes any responsibility in case an accident occurs.

If, in the judgment of any representative of the school, the above student should need immediate care and treatment as a result of any injury or sickness, I do hereby request, authorize, and consent to such care and treatment as may be given said student by any physician, trainer, nurse or school representative. I do hereby agree to indemnify and save harmless the school and any school or hospital representative from any claim by any person on account of such care and treatment of said student.

If, between this date and the beginning of athletic competition, any illness or injury should occur that may limit this student's participation, I agree to notify the school authorities of such illness or injury.

To the Parent:	❑	Baseball	❑	Football	❑	Softball	❑	Tennis	❑ Wrestling
Check any activity this student	❑	Basketball	❑	Golf	❑	Swimming & Diving	❑	Track & Field	
should be excluded from.	❑	Cross Country	❑	Soccer	❑	Team Tennis	❑	Volleyball	

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Student Signature: _____ Parent/Guardian Signature: _____ Date: _____

PREPARTICIPATION PHYSICAL EVALUATION -- PHYSICAL EXAMINATION

Student's Name_____ Sex _____ Age _____ Date of Birth_____

Height_____ Weight_____ % Body fat (optional)_____ Pulse _____ BP____/____ (____/____, ____/____)

Visiion R 20/_____ L 20/_____ Corrected: Y N Pupils: Equal _____ Unequal _____

As a minimum requirement, this **Physical Examination Form** must be completed prior to junior high athletic competition and again prior to high school athletic competition. It ***must*** be completed if there are yes answers to specific questions on the student's MEDICAL HISTORY FORM on the reverse side. *Girls participating in football must have a physical dated AFTER February 12, 1993.* **** Local district policy may require an annual physical exam.***

	NORMAL	ABNORMAL FINDINGS	INITIALS*
MEDICAL			
Appearce			
Eyes/Ears/Nose/Throat			
Lymph Nodes			
Heart			
Pulses			
Lungs			
Abdomen			
Genitalia (males only)			
Skin			
MUSCULOSKELETAL			
Neck			
Back			
Shoulder/Arm			
Elbow/Forearm			
Wrist/Hand			
Hip/Thigh			
Knee			
Leg/Ankle			
Foot			

*station-based examination only

CLEARANCE

❑ Cleared

❑ Cleared after completing evaluation/rehabilitation for: _____

_____

_____

_____

❑ Not cleared for: _____ Reason: _____

Recommendations: _____

_____

_____

_____

Name of physician (print/type) _____ Date of Examination: _____

Physician's Address: _____

Physician's Phone Number: _____

Signature of Physician: _____

*Must be completed before a student participates in any practice (both in-season and out-of-season) or games/matches.

Physicals

The preparticipation physicals should take place before a child enters middles school (7th grade) and before entering high school (9th grade). After these physicals, annual screenings should take place. These screenings are not as extensive as the preparticipation physicals. All forms are available at: www.uil.utexas.edu . Click on "athletic page" and then on "athletic forms." The forms presented can be downloaded and printed.[56]

Excerpt from: AHA Medical/Scientific Statement: Cardiovascular Preparticipation Screening of Competitive Athletes[57]

A Statement for Health Professionals From the Sudden Death Committee (Clinical Cardiology) and Congenital Cardiac Defects Committee (Cardiovascular Disease in the Young), American Heart Association

The sudden death of a competitive athlete is a personal tragedy with great impact on the lay and medical communities.[1] Sudden deaths in athletes are usually caused by previously unsuspected cardiovascular disease.[2-20] Such an event often assumes a high public profile because of the generally held perception that trained athletes constitute the healthiest segment of our society. The death of a well-known elite athlete often emphasizes this visibility. [1,21] Athletic field catastrophes strike to the core of our sensibilities and often galvanize us. They also inevitably raise a number of practical and ethical issues.

This statement is a response to these considerations and represents the consensus of a panel appointed by the American Heart Association Science Advisory and Coordinating Committee. The panel was comprised of cardiovascular specialists, other physicians with extensive clinical experience with athletes of all ages, and a legal expert. The panel (1) assessed the benefits and limitations of preparticipation screening for early detection of cardiovascular abnormalities in competitive athletes; (2) addressed cost-efficiency and feasibility issues as well as the medical and legal implications of screening; and (3) developed consensus recommendations and guidelines for the most prudent, practical, and effective screening procedures and strategies (the recommendations are listed at the end of this statement). This endeavor seems particularly relevant and timely, given the large number of competitive athletes in this country, recent public health initiatives on

physical activity and exercise, and the staging of the 1996 Olympic Games in the United States.

Recommendations

Advisability

The American Heart Association recommends that some form of preparticipation cardiovascular screening for high school and collegiate athletes is justifiable and compelling, based on ethical, legal, and medical grounds. Noninvasive testing can enhance the diagnostic power of the standard history and physical examination; however, it is not prudent to recommend routine use of such tests as 12-lead electrocardiography, echocardiography, or graded exercise testing for detection of cardiovascular disease in large populations of young or older athletes. This recommendation is based on both practical and cost-efficiency considerations, given the large number of competitive athletes in the United States, the relatively low frequency with which the cardiovascular lesions responsible for these deaths occur, and the low rate of sudden cardiac death in the athletic community. This viewpoint, however, is not intended to actively discourage all efforts at population screening that may be proposed by individual investigators. Nevertheless, there is concern that the widespread use of noninvasive testing in athletic populations could result in many false-positive test results, creating unnecessary anxiety among substantial numbers of athletes and their families, as well as unjustified exclusion from life insurance coverage and athletic competition. Indeed, in such a circumstance with a low incidence of disease in the community, a great likelihood exists that the number of false-positive results would exceed that of true-positive results.[68]

Consequently, we conclude that a complete and careful personal and family history and physical examination designed to identify (or raise suspicion of) those cardiovascular lesions known to cause sudden death or disease progression in young athletes is the best available and most practical approach to screening populations of competitive sports participants, regardless of age. Such cardiovascular screening is an obtainable objective and should be mandatory for all athletes. We recommend that both a history and a physical examination be performed before participation in organized high school (grades 9 through 12) and collegiate sports. Screening should then be repeated every 2 years. In intervening years an interim history should be obtained. Indeed, this recommendation is

consistent with procedures that are customary for most high school and collegiate athletes in the United States.

However, it is important to point out that official recommendations or requirements by athletic governing bodies regarding the nature and scope of preparticipation medical evaluations of athletes are not standardized among the states, nor can they necessarily be viewed as medically sufficient in many instances. Therefore, because of this heterogeneity in the design and content of preparticipation examinations, we also recommend developing a national standard for preparticipation medical evaluations. Adherence to uniformly applicable guidelines would have a substantial and cost-effective impact on the health of student athletes by enhancing the safety of athletic activities.

Despite the limitations of the history and physical examination in detecting coronary artery disease in older athletes (over 35 years), a personal history of coronary risk factors or a family history of premature ischemic heart disease may be useful for identifying that disease with screening and therefore should be performed before initiating competitive exercise. In addition, it is prudent to selectively perform medically supervised exercise stress testing in men older than 40 (and women older than 50) who wish to engage in regular physical training and competitive sports if the examining physician suspects occult coronary artery disease on the basis of risk factors, whether multiple (two or more, other than age and gender), or single but markedly abnormal. Older athletes should also be warned specifically about prodromal cardiovascular symptoms such as exertional chest pain. These guidelines should not promulgate a false sense of security on the part of medical practitioners or the general public because the standard history and physical examination intrinsically lack the capability to reliably identify many potentially lethal cardiovascular abnormalities. Indeed, it is an unrealistic expectation that large-scale standard athletic screening can reliably exclude most important cardiac lesions.

Methods

Preparticipation sports examinations are at present performed by various paid or volunteer physicians or nonphysician healthcare workers with different training and experience. Examiners may be associated with or administratively independent of an institution, school, or team.

Consequently, we strongly recommend that athletic screening be performed by a healthcare worker with the requisite training, medical skills, and background to reliably obtain a detailed cardiovascular history, perform a physical examination, and recognize heart disease. While it is preferable that such an individual be a licensed physician, this may not always be feasible, and under certain circumstances it may be acceptable for an appropriately trained registered nurse or physician assistant to perform the screening examination. In states in which nonphysician healthcare workers (including chiropractors) are permitted to perform preparticipation screening, it will be necessary to establish a formal certification process to demonstrate expertise in performing cardiovascular examinations.

Specifically, athletic screening evaluations should include a complete medical history and physical examination, including brachial artery blood pressure measurement. This examination should be conducted in an environment conducive to optimal cardiac auscultation, whether performed in a private office or as part of a school program. The evaluation should also emphasize certain elements critical to the detection of cardiovascular diseases known to be associated with morbidity or sudden cardiac death in athletes.

The cardiovascular history should include key questions designed to determine (1) prior occurrence of exertional chest pain/discomfort or syncope/near-syncope as well as excessive, unexpected, and unexplained shortness of breath or fatigue associated with exercise; (2) past detection of a heart murmur or increased systemic blood pressure; and (3) family history of premature death (sudden or otherwise), or significant disability from cardiovascular disease in close relative(s) younger than 50 years old or specific knowledge of the occurrence of certain conditions (eg, hypertrophic cardiomyopathy, dilated cardiomyopathy, long QT syndrome, Marfan syndrome, or clinically important arrhythmias). These recommendations are offered with the awareness that the accuracy of some responses elicited from young athletes may depend on their level of compliance and historical knowledge. Indeed, parents should be responsible for completing the history forms for high school athletes.

The cardiovascular physical examination should emphasize (but not necessarily be limited to) (1) precordial auscultation in both the supine and standing positions to identify, in particular, heart murmurs consistent with dynamic left ventricular outflow obstruction; (2) assessment of the femoral artery pulses to exclude coarctation of the

aorta; (3) recognition of the physical stigmata of Marfan syndrome; and (4) brachial blood pressure measurement in the sitting position. As noted previously, when cardiovascular abnormalities are identified or suspected, the athlete should be referred to a cardiovascular specialist for further evaluation and/or confirmation. Definitively identified cardiovascular abnormalities should be judged with respect to the 26th Bethesda Conference consensus panel guidelines for the final determination of eligibility for future athletic competition.[22]

Prevention of Anabolic Steroid Use

ATLAS (Athletes Training and Learning to Avoid Steroids) is a drug prevention program designed for high school male athletes. The curriculum utilizes a hands-on-approach, with interactive activities. A unique feature of the program is the use of an influential coach and peer leaders as facilitators in a team setting. In addition to ten 45-minute classroom sessions, there are three exercise sessions in the weight room.[58]

Anabolic Steroids[59]

Anabolic steroids are drugs that are used in sports to gain muscle mass, strength and enhanced athletic abilities. These drugs are a serious threat to physical and emotional health, and can cause a number of side-effects that include:

- Cancer (liver, prostate, kidney);
- Heart disease;
- Liver disease;
- Coagulation disorders;
- Hiv disease (needle sharing);
- Elevated cholesterol;
- High blood pressure;
- Uncontrolled aggression;
- Depression;
- Acne;
- Balding;
- Stunted height; and
- Shrunken testicles.

The effects of steroid use depend on the amount and length

of time the drug is used. These problems are more likely to occur among younger athletes. [60]

- Up to 11% of teenage males have used anabolic steroids.
- The most recent surveys report that 2.5% of adolescent females have used anabolic steroids.
- Anabolic steroids users are often engaged in high risk and multiple drug use behaviors.

Predisposing risk factors for steroid use among male adolescent athletes: [61]

- Use of drugs among friends;
- Win-at-all-costs attitude;
- Perceived low severity of side-effects;
- Low ability to turn down drugs;
- Perceived coach tolerance;
- Availability;
- Impulsive behavior;
- More reasons to use;
- Fewer reasons not to use; and
- Perceived vulnerability.

ALL AGES AND ETHNIC/RACIAL GROUPS ARE EQUALLY AFFECTED BY THESE RISK FACTORS.[62]

The ATLAS program is currently available through Sunburst Communications . For ordering information, please contact:[63]

Sunburst Communications, Inc.
101 Castleton Street
Pleasantville, NY 10570
Phone: 1-800-321-7511
Fax: 1-914-747-4109

Email: service@nysunburst.com

Website: http://www.SUNBURSTdirect.com

Exhibit 1: Commonly Used and Abused Drugs

Commonly Used and Abused Drugs [119]

Major Classification	Drug	Street name	How it is taken	Effects	Health Hazards
Stimulants	Cocaine/Crack	Coke, flake, girl, blow, nose candy, C, rock, lady	Inhaled through nose, injected, smoked	Increased heart and respiratory rates, raised blood pressure, dilated pupils, decreased appetite, increased alertness, sweating, headache, shakiness, blurred vision, sleeplessness, dizziness, moodiness, restlessness, anxiety, runny nose (if inhaled)	• If inhaled, may cause ulcers in nasal passages. • Extremely high doses can cause rapid or irregular heartbeat, tremors, loss of coordination or physical collapse (stroke, heart failure). • Using large amounts over a long time cause psychosis (hallucinations, delusions, paranoia). • Can cause psychological and physical dependency; tolerance develops rapidly. • If injected with shared needles, user may contract AIDS or other diseases.
	Amphetamines (e.g., Dexedrine, Benzedrine)	Dexies, speed, uppers, bennies, black beauties, pep pills, copilots, Christmas trees, ice	Taken orally, injected, inhaled through nose		
	Caffeine	Tea, cola, cocoa, coffee	Taken orally		
	Nicotine	Butts, squares, coffin nail	Smoked, chewed		
Depressants	Alcohol	Booze, fire water, juice, oils	Taken orally	Relaxation, slurred speech, staggering gait, altered perception, slowing down of reflexes and mental processes, calmness	• Very large doses can cause respiratory depression, coma, and death. • Combining alcohol and other depressants can multiply the effects and the risks. • Can cause psychological and physical dependence; tolerance can develop. • Withdrawal symptoms range from restlessness, insomnia, and anxiety to convulsions and death.
	Barbiturates (e.g., Amytal, Seconal)	Downers, barbs, blue or red devils, yellow jackets	Taken orally		
	Methaqualone (e.g., Quaaludes)	Ludes, sopors	Taken orally		
	Tranquilizers (e.g., Valium, Librium)	Muscle relaxers, sleeping pills, goof balls	Taken orally		
Narcotics	Heroin	Smack, horse, H, junk, stuff	Injected, smoked, inhaled through nose	Euphoria, relief from pain, contentment, drowsiness, nausea, constricted pupils, watery eyes, itching	• An overdose may produce slow and shallow breathing, clammy skin convulsions, coma • Can cause psychological and physical dependency; tolerance develops rapidly. • If injected with shared needle, user may contract AIDS or other diseases.
	Morphine	Dreamer, M, Emma	Injected, smoked, taken orally		
	Methadone	Dollies	Injected, taken orally		
	Opium	Dope, monkey	Smoked, eaten		
	Codeine	Syrup, schoolboy	Taken orally, injected		
Cannabis sativa	Marijuana	Pot, grass, weed, reefer, Mary Jane, joint, gold, Thai sticks	Eaten, smoked	Relaxation, sleepiness, impairment of short-term memory and comprehension, altered sense of time, poor concentration and coordination, anxiety, confusion, distortion of perception, red eyes, increased heart rate, increased appetite.	• Smoke is damaging to lungs. • May cause psychological dependence. • Can produce paranoia and psychosis. • May damage liver. • May affect maturation or function of reproductive system.
	Tetrahydrocannabinol	THC	Taken orally, smoked		
	Hashish	Hash	Eaten, smoked		
	Hashish Oil	Oil	Smoked (mixed with tobacco)		

[119] Massachusetts Department of Public Health. (1995). *Comprehensive School Health Manual* (pp. 14-17). Boston, Mass.: Author.

Major Classification	Drug	Street name	How it is taken	Effects	Health Hazards
Hallucinogens	Lysergic Acid Diethyamide Mescaline and Peyote Psilocybin	LSD, acid, cubes, microdot, Big D Mesc, buttons, cactus Magic mushrooms, 'shrooms	Licked off paper, taken orally, gelatin or liquid put in eyes Taken orally, chewed, smoked Chewed and swallowed	Pupil dilation, higher body temperature, increased heart rate and blood pressure, sweating, loss of appetite illusions and hallucinations, tremors, anxiety.	• Effects are unpredictable. • Flashbacks can occur even after use has ceased. • Bad trips, which may lead to suicide. • Heavy users may develop brain damage.
Inhalants	Solvents, nitrous oxide, aerosol sprays, paint thinner, gasoline, nail polish, model glue, cleaning fluid	Laughing gas, whippets, poppers, snappers, rush, bolt, locker room, bullet, climax	Vapors Inhaled	Nausea, sneezing, coughing, nosebleeds, fatigue, lack of coordination, bad breath, loss of appetite, exhilaration, confusion, change in heart rate (some increase and others decrease).	• Deeply inhaling vapors or using a lot in a short period may cause disorientation, violent behavior, unconsciousness, or death. • Long-term use may cause weight loss, fatigue, electrolyte imbalance, muscle fatigue, and permanent damage to nervous system, liver, kidneys, blood, and bone marrow.
Anabolic Steroids	Steroids (e.g., Deanobol, Durabolin, Winstrol)	'Roids	Taken orally, injected	Quick weight and muscle gain, acne, aggressive and hostile behavior, jaundice, swelling of feet, or lower legs, trembling, persistent unpleasant breath odor, purple or red spots on the body.	• Long-term use can damage the liver, cardiovascular system, and reproductive system. • In individuals who have not reached full growth, can arrest bone growth. • Users may develop changes in sexual characteristics that may be difficult or impossible to reverse. Males: abnormal hair growth, breast enlargement, shrunken testicles, sterility. Females: shrinkage of breasts, menstrual irregularities, growth of facial hair, enlargement of the clitoris.
Phencycidine	PCP, Semyl, Semylan	PCP, peace pill, hog, killer weed, angel dust	Taken orally, injected, smoked (on tobacco, marijuana, or parsley)	Increased heart rate and blood pressure, sweating, dizziness, slowing of time and movements, dulling of senses, poor coordination, speech blocked or incoherent	• Large amounts may cause death from convulsions, heart or lung failure, or ruptured blood vessels in the brain. • May cause violent or bizarre behavior or paranoia. • Regular use affects memory, perception, concentration and judgment. • If injected with shared needle, user may contract AIDS or other diseases.

Exhibit 2: Helpful References

National School Safety Center
141 Duesenberg Drive, Suite 11
Westlake Village, CA 91362
Phone 805/373-9977
Fax 805/373-9277

National Institutes of Health
National Institute on Alcohol Abuse and Alcoholism
6000 Executive Boulevard, Suite 514
Bethesda, MD 20892-7003
(301) 443-4897; (301) 443-8614 fax

Substance Abuse and Mental Health Services Administration
5600 Fishers Lane
Rockville, MD 20857
(301) 443-4111

National Institute on Drug Abuse
5600 Fishers Lane, Room 10-05
Rockville, MD 20857
(301) 443-6480; (301) 443-7397 fax

Alateen
(for teens who are worried about someone else's drinking)
P.O. Box 862
Midtown Station
New York, NY 10018
212-302-7240
U. S. Meeting Information:
800-344-2666

If you would like additional information or need help finding treatment please call the National Clearinghouse for Alcohol and Drug Information at 1-800-729-6686 or visit http://www.health.org.

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